

THE HIGH SCHOOL

Today and Tomorrow

WILLIAM M. ALEXANDER
University of Florida

J. GALEN SAYLOR
University of Nebraska

EMMETT L. WILLIAMS
University of Florida

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PREFACE

The *High School: Today and Tomorrow*, like its predecessor volumes (*Secondary Education: Basic Principles and Practices*, 1950, and *Modern Secondary Education: Basic Principles and Practices*, 1959) is intended as a basic text for all who work or plan to work in high schools. Although each is a different book, all present a comprehensive description of the background and present status of secondary education in the United States, reflect long-range and current trends, and anticipate some future developments.

Thus in 1950 Alexander and Saylor emphasized the needs of a post-war, expanding system of secondary education. By the end of that decade, the educational debates and curriculum reformation, in part precipitated by national defense considerations, were under way, and these authors included in the 1959 book considerable material on secondary education in several European nations and information on the issues it faced in the United States.

The 1960s witnessed all the debate and change that Alexander and Saylor foretold in 1959, and even more. During this decade the high schools responded to the criticisms of the academic program, especially because of the increasing number of graduates going on to college, and then turned new attention to the dropouts and disadvantaged students. Reflecting social concern for the individual in an ever greater population of an ever more complex society, the schools sought better focus of their program, instruction, and organization on the individual student. As the decade turned, student unrest in the high schools was being reflected in the development of alternative schools and major changes in the traditional high school. In this third volume Alexander, Saylor, and their new collaborator, Williams, describe these changing forces and their impact on curriculum and instruction in the high school today and tomorrow.

The scope of the book is indicated by its parts. Part I—The High School in American Life—places the high school in its setting and role through data on its current status and historical development; the impact of present and future trends; the high school student; purposes of the high school; and the role of high school teachers. Part II—The Curriculum of the High School—defines and describes the components of the curriculum, details the impact of changing knowledge, and explains approaches toward individualizing the curriculum. Part III—Teaching in the High School—presents a selective treatment of significant aspects of high school teaching: teacher planning; new trends in classroom instruction; and various ap-

proaches to team teaching and other patterns of cooperative teacher activity, including differentiated staffing patterns. Part IV—The High School of Tomorrow—is a comprehensive proposal for a high school which would serve future social and individual needs; this part, then, provides a basis for discussion of this and other possible models of the high school of the future. Thus we seek to enable all students of the high school to understand its role in American life, its program, the tasks and opportunities of its personnel, and its possible future directions.

Our book is organized and written to help provide both breadth and depth for students and instructors in basic secondary education courses. The intent is to give a basic coverage of the high school with extensive references to other sources in order to assist students in going as deeply as they wish into any facet of the field. Frequent footnotes give specific sources related to particular topics. In addition, annotated references to sources not cited in the text and its footnotes are listed at the end of each chapter.

We wish to acknowledge our debt to users of the previous editions for suggestions considered in preparing the present text. Appreciation is also expressed to publishers and authors whose works we have cited or quoted, and to the schools from which we have drawn illustrative practices. We are especially indebted to the many students and colleagues with whom we have worked in various schools, universities, and other organizations for the opportunities to interact in our common search for ever-improving schools.

THE AUTHORS

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PART I

THE
HIGH SCHOOL
IN AMERICAN
LIFE

To understand such an important social institution as the school, one must know its historical antecedents, its traditions, the role and functions it is expected to serve in the society, and the purposes for which it is established and operated. It is highly appropriate, therefore, to begin our study of the American high school in Part I with these topics.

In Chapter 1, we look at the high school as an institution. The place of the high school in the total program of public education is described, and the types of secondary schools which have evolved in this country are listed. The historical antecedents of the high school as it exists today are traced. The school evolved gradually with the social group constantly endeavoring to modify and adapt it to new conditions as they emerged.

We particularly believe that the high school will continue to adapt itself to changing social conditions once these have been firmly established as the conditions in which the schools function. In Chapter 2 we analyze what we consider to be significant social developments that will characterize the remaining years of the twentieth century. Of course, it is recognized that many of the basic conditions and characteristics of American life will continue, but the topics discussed in that chapter represent what we think will constitute new social, political, and economic conditions to which the schools must adapt.

Chapter 3 considers another of the fundamental factors that determine the character and nature of the program of schooling—the characteristics and traits of the young people to be educated in the schools. It would take an entire book to treat adequately all characteristics of adolescents and youth; therefore, we have selected certain aspects that constitute new sets of conditions and demands which the schools must face. Just as a society grows, develops, and creates new conditions and new factors that strongly impinge on its social institutions, so also do the motivations, interests, and aspirations of youth

change, although always within the basic and enduring characteristics of man as he lives in social groups.

As a social institution the high school was established for specific purposes. Society expects it to perform certain roles, fulfill assigned functions, and serve certain ends. Chapter 4, therefore, discusses the ways in which the American people define the functions and purposes of the high school, states some of the major goals and aims of education, and describes procedures for stating objectives of the day-by-day instructional program of the school.

Since the success of the high school depends to a very large extent on the kinds of teachers who are employed to instruct youth, Chapter 5 discusses the teacher and his role and responsibilities in the school. Attention is given to the kinds of characteristics that distinguish successful teachers, and some suggestions about the types of preparatory programs that should be provided in the universities and colleges for the preparation of secondary school teachers are presented.

These five chapters, then, endeavor to provide an understanding of the secondary school as it has evolved in the history of the American people, seek to clarify its role and function, and establish the philosophical base on which we will analyze the high schools of today and point the directions to the kinds of high schools we need in the future. These latter aspects of the book will be treated in Parts II, III and IV.

CHAPTER 1

The American High School Today

Among the nations of the world, the system of secondary schools established by the United States is unique in several ways, although it is quite evident that in recent years a number of other nations are adopting, in part at least, many of the principal characteristics of the American system. In this chapter we shall describe this system of schooling for American adolescents and young adults, particularly analyzing its unique features and the forces in American life that have resulted in the evolution and establishment of the American secondary school of the present day. Of primary concern are two questions: What are the nature and the characteristics of American secondary schools? Why has the American secondary school evolved in its present form and structure? Such a discussion, we believe, will give us a background and a basis for the intensive study of this institution that follows in the remainder of the book.

The System of Secondary Schooling

What Is a Secondary School?

Although educated adults throughout the world understand what is meant by the term "secondary school," it seems appropriate at the outset of this book to define the term and characterize the institution about which this book is written.

Secondary schools are institutions that provide the level of formal education following elementary (and middle school, if this type of school is provided) and preceding higher education. As will be shown later, the nature and length of the program of presecondary education varies among the school systems of the nation. Hence, necessarily, the program of secondary education also varies in extent, program, and structure. It is not feasible, therefore, to designate specific age groups or grade levels

that characterize the program of secondary education. It is valid to state that secondary education is designed primarily for youth during the adolescent period of development, encompassed usually within ages twelve to eighteen but with these age levels quite elastic at each end in terms of pupils enrolled in typical secondary schools.

Completion of a formal program of secondary education is usually a prerequisite for admission to colleges and universities or even to other types of postsecondary schools and institutes. Thus it is further proper to state that secondary education is the formal program of education that is offered before the specialized programs at the college or university level or in specialized institutions for young adults.

In many school systems of this country at the present time, the program of secondary education is subdivided into two parts—the first two to four years is offered in a school designated as a junior high school and the last three or four years in one usually designated as a high school, or in the case of the three-year school as a senior high school. In some countries of the world, however, the term "high school" designates an upper type of school that may be comparable to our junior colleges or lower levels of collegiate education. But the term "secondary school" has a common meaning throughout the world—the school that stands between the elementary school and the higher institutions of collegiate or institute rank. In this book we will use the term high school much more frequently, thereby designating a school that continues the formal, common-school education of the young beyond the elementary and middle school period, but prior to collegiate or institute-level education. High school education usually is four years in length, but may be five or six years, perhaps subdivided into two parts of junior and senior high school.

The Organizational Structure for Secondary Education

A school system or even a single school must be organized in some manner to provide systematically for the education of pupils. The organization of the school system horizontally consists of a graded or level system of instruction. Commonly twelve grade levels of instruction comprise the program of elementary and secondary education, but many school systems in addition offer a kindergarten program for five-year-olds prior to the first grade and, in recent years, a few school systems have offered programs in nursery schools for a limited number of pupils at the prekindergarten level, and, more recently, with financial assistance from the federal government, programs designated as Head Start.

Another kind of organization is designated as vertical organization of the system into various levels of schooling. We have already mentioned the fact that there are primary or elementary level schools, middle schools, secondary level schools, and institutions of higher education. The educational system prevalent in the United States is unitary in character; pupils

may progress uninterruptedly from the kindergarten or first grade of schooling through the secondary school to collegiate or postsecondary institutions of learning. In many countries of the world a multipartite system of schools exists beyond the primary school level, with pupils being admitted to the regular academic secondary school on the basis of examinations or other selective devices indicative of high level of achievement in academic school subjects. In turn, admission to collegiate institutions is usually only open to graduates of these selective secondary schools.

No such selective devices are used in the American system of education, so that boys and girls are permitted freely to advance to the next level of schooling after they have been certified as having satisfactorily completed the program of the previous school. Some specialized secondary schools, to be discussed later, are exceptions to this practice, and many collegiate institutions today do practice selective admission, but nevertheless there exists throughout the United States collegiate institutions, both two-year community or junior colleges and four-year senior colleges, that accept students on the basis of a high school certificate of graduation.

A unitary system. The division of the 12 or 13 grades comprising the regular common school program into various school organizations varies considerably throughout the United States. Figure 1 illustrates five of the most commonly used types of vertical organization of school systems.

Traditionally, by the latter part of the nineteenth century the elementary school consisted of the first eight grades of schooling, and the high school, as it was usually designated, grades 9-12. Many educational leaders throughout the country, however, came to believe that the period of elementary education was being much too prolonged and that secondary education suffered thereby. They recommended that the program of secondary education begin at least two years earlier, with grade 7, and that elementary education be shortened to six years of regular schooling beyond the kindergarten. This led to the establishment of the junior high school as the first part of the program of secondary education. Such schools came to be designated as "reorganized" secondary schools in contrast to the traditional type of organization. The common pattern of reorganized schools is illustrated in the second column of Figure 1. The junior high school usually consisted of grades 7, 8, and 9 and the senior high school of grades 10, 11, and 12. However, some school systems varied somewhat from this pattern, placing only grades 8 and 9 in the junior high school and extending the elementary school for seven grades or occasionally having only the seventh and eighth grades in the junior high school and retaining a four-year high school.

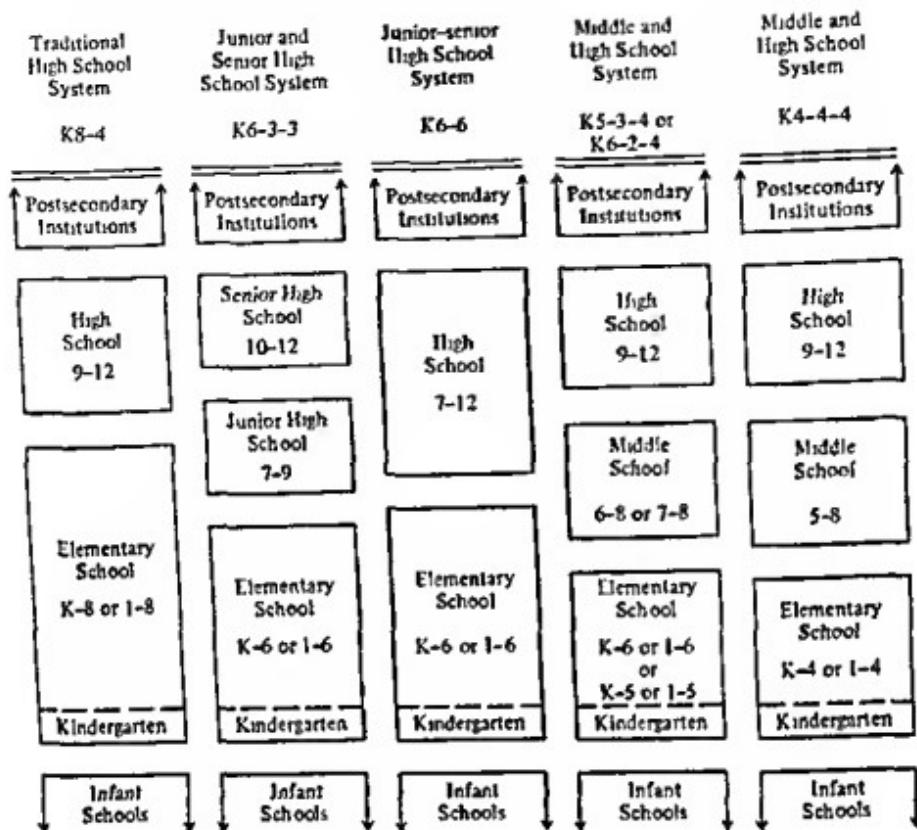


Figure 1. Types of school organization in the United States.

organized a single secondary unit, consisting of a six-year junior-senior high school. This plan is illustrated in the third column. In some instances, the school was administered and structured as a single unit of six grades, but in other instances there were administrative divisions made between the first three years of the program and the last three years, although the entire six grades would be housed in a single building and be administered as a single unit. Also, a number of larger city school systems often used the six-year junior-senior high school combination in new buildings on the fringes of the city until that area became populated heavily enough to warrant the building of separate schools.

The middle school. During the 1960s, a number of educators, in keeping with the spirit of the widespread movement to experiment and innovate in an effort to improve educational programs in the United States, advocated the development of what has come to be designated as the middle school.¹ This evolving new type of organization is illustrated in

¹ William M. Alexander and others, *The Emergent Middle School*, 2d ed. (New York: Holt, Rinehart and Winston, Inc., 1969), pp. 3-10.

the fourth and fifth columns of Figure 1. The development of the middle school does not constitute a drastic reorganization of the school system; it has resulted in the inclusion of the ninth grade, if this was not already the case, in the high school so that it became a four-year school, and the reorganization of certain grades previously considered elementary or secondary into a middle school. School systems vary in the composition of the middle school, with most systems including grades 6, 7, and 8 in this unit, and a few only grades 7 and 8, but many others introducing a somewhat more extensive revision by dividing the 12-grade school program into three equal units each of four grades.² The movement to modify the junior high school type of organization—whether it was the 6-3-3 plan, a 6-2-4 plan, or a 7-2-3 plan—to a new type of organization in which the school between the elementary school and the high school came to be designated as a middle school took root in the mid-1960s and had spread extensively by the end of that decade.

The middle school, according those who have been active in its establishment and the formulation of its program, is not a reorganized secondary school; it is a new type of school with a new conception of education for students who are "in-betweeners," between the period of elementary schooling but prior to secondary-level schooling. Alexander and his co-workers insist that the middle school "builds upon the elementary school program for earlier childhood and in turn is built upon by the high school's program for adolescence Thus, the emergent middle school may best be thought of as a phase and program of schooling bridging but differing from the childhood and adolescent phases and programs."³

Inasmuch as this book is concerned with the high school and secondary education in general, the middle school will not be included in the treatment except as desirable to clarify relationships. The junior high school as it has and now exists in many communities is considered to be a part of the secondary education program for adolescents and young adults.

Ungraded schools. A further innovation in both elementary and secondary education has been the establishment of ungraded schools (see Chapter 8). This reorganization of instruction on a basis other than the traditional graded system, nonetheless, did not change the vertical organization of the school system. It simply abolished the sharp distinctions between yearly designated levels of instruction within a school level itself rather than altering the general pattern of organization illustrated in Figure 1.

These charts and this discussion explain why the educational system of the United States is designated as a unitary system, often pop-

² Alexander and others, Chapter 9.

³ Alexander and others, p. 5.

ularly called a ladder system, of schooling. Charts of school organization similar to Figure 1 for other countries of the world would show a multi-lateral system being established early in the child's program of formal schooling. In many countries, this occurs at the end of the fourth grade or at about age ten and a half or eleven. At that point, those who seek admission to the academic type of secondary school are required to take achievement and scholastic types of examinations, and admission to the regular secondary school is then restricted to as few as the top 15-25 percent of all the boys and girls of the nation. The remaining 75-85 percent must continue in the elementary school through the compulsory period of education, and then the only further schooling usually available to them is in schools of a vocational type, and beyond that, in technical institutes or trade schools. In some countries, youngsters who have not been selected for the academic school on the first round may qualify for admission later and, hence, transfer to the academic secondary school and then be eligible to attain a secondary school diploma and meet that requirement for admission to collegiate institutions. It should be pointed out that even in countries where this is possible, very few of the children attempt such transfer.

Postsecondary schools. Figure 1 simply suggests the whole array of postsecondary schools that are a part of the complete educational ladder system of the United States. These institutions include colleges and universities of all sorts extending from the freshman collegiate year through the advanced levels of graduate and professional study. But of special interest to secondary educators is the extensive group of institutions called community or junior colleges or sometimes by both terms, community junior colleges, and vocational and technical institutes. Inasmuch as these latter two types of institutions constitute closely related extensions of the program of secondary education, their existence should be noted, but we will not discuss these institutions in this book on secondary education.

Suffice it to say that community colleges in some instances are operated by the local district board of education itself, in others, by a special junior college district board, or, in a few states, by a state board of junior college education.

The movement to establish postsecondary level vocational and technical schools or institutes became widespread in the latter part of the 1960s and continues unabated. These institutions usually are not collegiate in nature, inasmuch as they are not accredited as such and do not endeavor to offer credit courses applicable to bachelor's degrees, but nevertheless they usually require enrollees in their advanced vocational and technical courses to be high school graduates. Some of the institutions have a lower level of vocational programs that will accept young adults who do not hold a high school diploma.

These institutes or schools offer extensive programs of occupational training in various fields of employment. Many of them also offer courses designed to extend general education or skills development, especially in communications and mathematics. Some of the occupational training programs are quite comparable in scope and nature to vocational courses offered in some comprehensive city high schools or in specialized vocational schools operated by school districts. But most of the programs are more advanced and more demanding and prepare the individual for employment in semiskilled and skilled occupations of various kinds. The important thing for secondary educators is to recognize that these institutions are directly a part of the total program of unitary education for the youth of America and constitute extensions of the program of secondary education. The two institutions, the high schools of the community or region and the vocational technical institutes, should be closely related and their programs should be fully articulated and integrated. Persons preparing to teach at the secondary level may also be interested in employment opportunities in these institutions, particularly those persons who are specializing in the vocational and business fields.

New types of schools for youth and young adults. In recent years some new types of schools and educational programs for youth and young adults have been established. In several cities "street academies" or "free-form" types of schools have sprung up, sometimes under the official aegis of the school system, such as the Parkway Program in Philadelphia, Freedom Annex in Washington, D.C., and Metropolitan High in Chicago, and sometimes under other sponsorship, as the Community School of Santa Barbara, the Sante Fe (New Mexico) Community School, Harlem Prep and the "street academies" of various kinds in New York. Fourteen of these types of schools were operating in New York City in the 1969-1970 school year, with "hundreds" of others reported to have sprung up across the country. And the movement continues to spread. Chapter 8 discusses these schools in more detail, citing them as examples of individualization of programs of education for youth.

Other types of educational programs have also been developed in which separate institutions have been established. Examples are the Job Corps centers established in the mid-1960s and continued in some instances on a modified form thereafter, and the Manpower Training Centers, established specifically to provide occupational training for unemployable or underemployed young adults. In addition to these programs, industrial and business firms, usually with financial support from the federal government, have contracted to provide occupational training and on-the-job work experience for "hard core" unemployable youth and young adults. Often these trainees were dropouts from the high school and had not completed the formal program of secondary schooling.

Another development in the establishment and organization of schools

that should be included in this discussion is the procedure of contracting for instruction. Recently some public school systems, in experimenting with different approaches to education, have contracted with private companies to provide some of the instruction. In most of these programs the contracts have been for instruction in fundamental school subjects, particularly reading and arithmetic, at the elementary school level, but a few contract for occupational training at the secondary level. The private firms agree to provide instruction in the specified fields under conditions set up by the school systems. The firms are responsible only for a small portion of the total school program, but use their own methods of providing the instruction, and the contract usually calls for the attainment of stated levels of achievement by the students enrolled in these contracted fields. However, in 1970 the Gary, Indiana, public schools contracted with a private business firm to take over and operate one of their elementary schools on an experimental basis for a four-year period.

What changes will result in the program of public secondary education in the years ahead in light of these developments in so-called "community" schools, street academies, free-form schools, or contracting with private agencies for a portion of instruction is unpredictable at the present time, but certainly students of secondary education will want to study and analyze critically these experiments and new types of development.

Types of Secondary Schools

High schools in this country may be classified into four general types:

1. Comprehensive high schools
2. General high schools
3. Specialized high schools
4. Vocational high schools

A comprehensive high school is a school that is open to all youth of a community or attendance area and offers a broad program of academic, practical, prevocational, and vocational education. It endeavors to serve the principal objectives of general and specialized education at the secondary school level and to serve the significant and important educational needs of all its potential student body. James B. Conant, one of the revered authorities on secondary education in this country, defined "the comprehensive high school as a high school whose programs correspond to the educational needs of *all* youth of the community."⁴ He stated that the three main objectives of a comprehensive high school are:

First, to provide a general education for all the future citizens; Second,

⁴ James B. Conant, *The American High School Today* (New York: McGraw-Hill, Inc., 1959), p. 12.

to provide good elective programs for those who wish to use their acquired skills immediately on graduation; *Third*, to provide satisfactory programs for those whose vocations will depend on their subsequent education in a college or university.⁵

And in the same volume John W. Gardner, soon thereafter to become Secretary of the Department of Health, Education and Welfare in President Johnson's cabinet, wrote in a foreword that:

The "comprehensive" high school (is) a peculiarly American phenomenon. It is called comprehensive because it offers, under one administration and under one roof (or series of roofs), secondary education for almost all the high school age children of one town or neighborhood.⁶

The term *general high school* is used by us to designate a school that fails, for various reasons, to offer the kind of program desirable in a comprehensive high school for the education of all youth. Its program is restrictive and falls far short of the scope of the comprehensive high school, either because the school is small in size and cannot economically and effectively offer a broad program, or because the student body itself is not a typical cross section of American youth, and therefore needs only a restricted type of educational program, usually one devoted principally, if not exclusively, to the academic type of course program. However, it should also be noted that most junior high schools do not offer a comprehensive program in the terms stated by Conant and Gardner, so they would be classified as general secondary schools under our scheme.

But the general high school is usually open to all youth of a district or attendance area and differs from the comprehensive high school solely on the basis of the limited character of its educational program.

A *specialized high school* offers a program adapted to the educational needs of a special group of students, and it usually sets admission requirements that demonstrate traits and abilities needed for success in such special programs. These high schools are found only in large city school districts, and they select their student body from among the youth throughout the city who are interested and qualified to pursue the programs which the school offers at advanced and highly specialized levels of study. Students who are not interested or are not qualified for specialized high schools may, of course, enroll in the neighborhood high school of a comprehensive or general nature.

Specialized high schools have been established by some school districts for the highly academically talented students who wish to specialize in the sciences, mathematics, and similar disciplinary subjects, musically or artistically talented youth, those with a high level of mechanical and

⁵ Conant, p. 17.

⁶ Conant, p. ix.

technical capabilities, and those interested in advanced preparation in selected vocational fields such as business, fashion design, electronics, or other skilled occupations.

A *vocational high school* is usually open to any youth of the community, although pupils may be required to be sixteen or eighteen years of age to enroll in certain of the schools or to enroll in certain programs. Such schools offer extensive programs of vocational training for designated occupations. The school also offers course work in the academic subjects, particularly English, social studies, and mathematics, but often the level of achievement demanded is not as high as for similar courses in the comprehensive or general high school. Moreover, the level of occupational training is not as technical or advanced as in those specialized types of schools that provide training in the skilled occupations.

Description of High Schools

High schools that exist in the United States today may now readily be described on the basis of these four types of schools.

1. *Regular high schools (grades 9-12) or senior high schools (grades 10-12)*

Many of the three- and four-year high schools are comprehensive types of schools. Although the degree of comprehensiveness varies somewhat among the schools included in this category, practically all of the high schools or senior high schools that constitute the only upper secondary school in communities as small as 5000 or 10,000 people, as well as the neighborhood high school that serves an attendance area in a metropolitan city, are comprehensive in nature. Most high schools in suburban districts of considerable population or consolidated schools that constitute the single high school for a large rural area usually are comprehensive in type. Some nonpublic schools may properly be classified as comprehensive in character.

An adequate breadth of program to constitute a true comprehensive type of secondary high school is usually not found unless the school enrolls at least 500 students and more often at least 1000.

But it must be recognized that a considerable number of schools in this country today would not qualify as comprehensive schools in the strict sense of that term. Some may more properly be labeled as "academic" or "limited comprehensive" types of schools. High schools that serve communities or neighborhood attendance areas in which the population is fairly homogeneous, particularly with respect to socioeconomic status of the families, such as would be found in middle and higher income suburban areas or attendance areas of large cities, are not truly comprehensive schools. Also, many nonpublic high schools have limited programs either because of the nature of the student body or the inability to provide an extensive program. This type of school is also found in smaller communities that ordinarily could not afford and do not have the demand for a program that would entitle it to be labeled as comprehensive.

Academic or limited comprehensive high schools do not offer the full range of subjects usually associated with a comprehensive school but emphasize the traditional academic subjects, music, physical education, homemaking, and art; they offer little work in the fields of vocational, advanced industrial arts, or business courses. Neither would such schools usually offer specialized advanced courses in an academic subject field such as a program of three or four foreign languages, advanced placement or honors programs in mathematics, science, and the like.

National reports show that a number of high schools are small four-year schools which offer limited programs that do not include vocational work and no (or only introductory) courses in industrial arts, art, and foreign languages, and few, if any, advanced courses in mathematics and science. These schools we would label as "general" high schools.

We have throughout the country, usually in large city systems, high schools that offer extensive programs in selected vocational fields, particularly the trades and industrial areas and business occupations, but whose program is pegged at the introductory and lower levels of such vocational skills. Such schools offer subjects in the regular academic fields, particularly English, social sciences, mathematics, and science as supporting courses or general education courses for its students but little or nothing at the advanced level nor honors or advanced placement courses for intellectually talented students. Often there are programs in homemaking, music, and art, but not the advanced types of programs available in the comprehensive school.

The "specialized" high school has been previously described; it is the type of school that offers a high level and advanced program in particular areas of study such as music, art, business, skilled trades, automobile repair, printing, and possibly other fields. A few schools that specialize in a highly academic advanced college preparatory program also exist in some of our major cities, such as the well-known Bronx High School of Science in New York City, or Central High School in Philadelphia. But throughout the country, probably not more than 20 or 30 specialized high schools exist.

2. Junior high schools (usually grades 7-9)

The term comprehensive high school is not properly applied to the junior high school inasmuch as it is not the function of such schools to provide extensive programs of prevocational or vocational work nor advanced courses of an honors or advanced placement type in the academic fields. Therefore, the most logical thing is simply to classify practically all junior high schools as "general" secondary schools. They do provide an adequate program in the academic subject fields for this age group, and offer limited work in the practical fields of homemaking, industrial arts, and, occasionally, in business. Introductory courses in music and art are of course available and physical education is a standard item in the program of such schools.

But some junior high schools are so small and have such a restricted program that it would not be appropriate to group them with the larger schools that offer the breadth of program indicated above. These small junior high

schools offer quite limited programs in the basic fields of English, social studies, mathematics, and science. Many of them offer no foreign language, and seldom any shop or homemaking. The work in art and music, if any, is fragmentary and at an introductory level. They may be described as "restricted general" junior high schools.

3. Six-year high schools (grades 7-12)

Ocasionally, six-year high schools are established in larger school districts as a means of serving pupils in fringe areas of the city. Some of these schools offer an extensive program of course work and are truly comprehensive, but many are more limited in scope. However, it should be noted that in some of the rural areas of the country a six-year high school constitutes the community high school for quite a large land area and children are bussed from some distance. In such instances, the school may be of a comprehensive nature, offering an extensive program in all of the usual fields of study. But most six-year high schools should be described as "limited comprehensive" schools, and those of even more limited programs as general high schools, inasmuch as they are not large enough, even with the inclusion of six grades, to offer a broad program.

Many cities provide opportunities for young adults or adults to take high school courses for regular credit on a part-time basis in an adult or evening type school. Such a high school usually offers a limited program of academic subjects. It is designed primarily to enable young adults and adults older than the typical high school student to earn a high school diploma on a part-time basis.

It should be noted, however, that most city school systems also provide many types of programs in the prevocational, vocational, and practical areas as well as in liberal arts areas for adults, but such courses do not provide credit that applies toward a high school diploma.

Number of Secondary Schools in the United States

The extent to which the public secondary schools of the United States have adopted the various patterns of organization discussed previously is shown in Table 1. In the larger city school districts, those enrolling 10,000 or more pupils in all schools, the predominant pattern of organization is the elementary-junior high school-senior high school plan. In the smaller cities and rural areas the traditional 8-4 plan continues to exist.

This table does not show the specialized vocational schools, of which there were approximately 275, according to other studies, nor incomplete, that is two- or three-year secondary schools, numbering about the same figure.

Table 1. Number of Public Secondary Schools in the United States According to Total Pupil Enrollment of School District, 1968

Type of School	Size of School District in Total Enrollment							Total
	25,000 or more	10,000-24,999	5000-9999	2500-4999	300-2499	Under 300		
Junior High School								
Grades 7-8	147	190	219	392	900	—	1848	
Grades 7-9	1597	1050	936	613	864	—	5060	
Junior-senior School								
Grades 7-12	236	242	328	526	2536	576	4444	
Regular High School								
Grades 8-12	124	41	120	138	331	36	790	
Grades 9-12	624	506	560	937	3342	1081	7050	
Senior High School								
Grades 10-12	762	526	568	544	742	—	3142	
Other Secondary	158	155	199	105	151	36	804	
	3648	2710	2930	3255	8866	1729	23,138	
Combined Elementary and Secondary School	227	238	531	472	453	108	2029	

Source: U.S. Office of Education, National Center for Educational Statistics, *Statistics of Local Public School Systems, Fall, 1968* (Washington, D.C.: Government Printing Office, 1970), p. 4.

Factors Producing Variations among Secondary Schools

The secondary educational system of the nation is obviously a vast conglomerate of almost 28,000 public and nonpublic institutions that vary in many important and significant aspects. Some of the important factors that produce variations among the schools and consequently the nature of the educational program will be listed and discussed briefly.

Size

One very noticeable and significant difference among schools is, of course, size. Public secondary schools vary from rural schools that enroll as few as 25 pupils in grades 9-12 to large metropolitan high schools that enroll about 6000 students.⁷

⁷ U.S. Office of Education, National Center for Educational Statistics, *Directory:*

Location of the Secondary School

Another factor that significantly produces variations of many kinds among secondary schools is the location of the school itself. As a first step in an analysis of this factor, we can identify schools as located in rural areas, urban areas, and suburban areas.

Secondary schools in rural areas usually constitute the bulk of the smaller high schools described above. However, in recent years, a number of states have undertaken extensive programs of school district reorganization and consolidation of school districts so that a much larger population would be included in a local school district even in a rural and small town area. Often this results in a much larger enrollment in a secondary school serving the consolidated district than is true in many individual school districts.

But location often results in other differences and variations among secondary schools, particularly in the nature and character of the student bodies enrolled. Usually the boys and girls enrolled in secondary schools in rural areas are much more homogeneous in social, economic, and ethnic factors, aspirations and postsecondary school career plans, and the like than would be true of secondary schools located in urban areas; however, we should not make generalizations too glibly here for in the southern states many Negro families live in rural areas, and this results in heterogeneity in schools in rural and small town locations.

Often the pupil populations attending secondary schools located in suburban areas are also more homogeneous than in the adjoining urban school district. But again generalizations should be stated with extreme caution, for many communities that originally conformed to the typical suburban concept of social, economic, and ethnic status have themselves become rather large communities with many of the characteristics of an independent city rather than of a suburban community or city. Examples of this situation would be White Plains, New York; University City, Missouri; Lakewood, Ohio; and many more that could be named. Nevertheless, at the present time it is rather generally true, as Conant describes in his chapter on the "College-Oriented suburbs,"¹² that the schools of these areas are comprised of youth whose families are relatively high in income in comparison to the total population of the area, are white, have had more education than is common for the adults of the total community, and whose plans include college enrollment of their children.

Schools in urban areas vary greatly in characteristics of their student population. In some schools the student body is quite similar to the student body in the highest income suburban area of the metropolis; but

¹² James B. Conant, *Slums and Suburbs* (New York: McGraw-Hill, Inc., 1961), Chap. 4.

in other urban schools located in slum areas the income of the adults of the attendance area is the lowest in the metropolitan area, with many of the families on welfare, with no regular employment, or employed irregularly or on a hit-and-miss basis at the lowest level of unskilled or semi-skilled jobs. The student population of such a school often represents a great variety of ethnic backgrounds; encompasses children of a number of racial groups, frequently with Negroes predominating; and the socio-economic status may vary considerably, depending on the attendance area served. Often there is a high drop-out rate, and postsecondary career plans for graduates seldom include college attendance.

Social, Economic, Ethnic, and Parental Factors

In considering variations among schools because of location, we have already indicated that great variation exists among secondary schools because of various social, economic, ethnic, and parental factors. But these factors should be considered independently of sheer location. It is quite possible, and often happens, for example, that a small high school located in a rural area will actually have a student body whose parents have very meager incomes, whose level of education is low, whose ethnic background may not be Anglo-Saxon or Teutonic, and yet who belong to the white race. Schools located in small, isolated communities, such as the coal mining sections of the Appalachians, would be representative of such a situation.

On the other hand, Cass Technical High School of Detroit is an example of a school located in the central-core area of a large urban city that has a selected student body with high capabilities for intellectual and creative attainments which represents a variety of social, economic, ethnic, and parental backgrounds. Dunbar Vocational High School, located in the central part of the city of Chicago, is almost exclusively Negro in racial composition, and the pupils generally come from families of relatively low incomes with most parents working at lower levels of skilled or unskilled occupations or living on welfare. In Washington, D.C., more than 90 percent of all students enrolled in the public secondary schools are Negro, with the result that practically all of the high schools predominantly—almost exclusively in a number of schools—enroll students of that race. However, the socioeconomic factors vary considerably from school to school and even among the students in each school. In contrast, in the four senior high schools of a north central city, 1.2 percent of the total enrollment in 1969-1970 was Negro; in one of the senior high schools only one out of a total enrollment of 1885 was Negro; in another senior high school with 1306 students enrolled only four were black. Negro students enrolled in secondary schools in that city mostly

attended just one of the secondary schools, but even there they constituted only 3.5 percent of the entire student body.

Characteristics of Students

The most significant factor accounting for the great variation among the secondary schools of the nation, obviously, is the characteristics of their student bodies—the talents, capabilities, potentialities, needs, interests, concerns, aspirations, cultural development, socioeconomic status, career plans, motivations, self-concepts, drives, and emotional development of the youth enrolled in the school itself. This is so important a factor in the determination of the character and nature of the program of secondary education in this country that the next chapter will be devoted entirely to this subject.

The authors, of course, are not in this discussion stating or implying what factors constitute the best set of conditions for carrying on a program of secondary education, but, rather, calling the reader's attention to the fact that the 28,000 secondary schools throughout the nation vary greatly on the basis of a number of factors that have significant implications for the nature and kind of a program to be offered.

Neighborhood Schools and Educational Complexes

Historically, the concept of a neighborhood school has dominated both the legal and administrative structure for building, establishing, and administering schools in districts throughout the United States.¹²

In small school districts with only one school at each level, obviously that school serves the entire district, which by the nature of it would be relatively small in size and population. But in more heavily populated school districts, where more than one school exists at any level, the board of education, in common practice, establishes attendance areas and pupils are required to attend the school located in their attendance area, with permits for transfer to another school often being available for acceptable reasons.

The concept of the neighborhood school has been extensively and vociferously defended, particularly at the elementary school level, in American educational circles and accepted as the only feasible way in which to administer a system of elementary and secondary schools in a large district. But as Weinberg points out, the concept of the neighborhood school and the designation of attendance areas for each school has been one of the major factors in legal (until the U.S. Supreme Court decision

¹² Meyer Weinberg, *Race and Place: A Legal History of the Neighborhood School*, USOL-38005 (Washington, D.C.: Government Printing Office, 1967).

of 1954) and de facto segregation in many of our southern states as well as in large cities in other states. Many court decisions, including some rendered by the U.S. Supreme Court, have ruled on various aspects of attendance restrictions and the neighborhood school concept.¹⁴

School districts have used various methods in recent years to control the size of enrollments in secondary schools in terms of the capacity and facilities of the building, yet have sought to minimize the segregating aspects of prescribed attendance areas. Plans for open enrollment without restriction on the basis of residence, school district busing of pupils from what has been one attendance area to another, and the abolition of all prescribed attendance areas have been tried by school systems in recent years.

Another approach to the problem has been to consider the advisability in metropolitan school districts of establishing large school plants that would accommodate much greater numbers of pupils in a common school facility than has been true in the past. These facilities, already under development in certain cities and being proposed in other school districts, are often designated as educational plazas, educational parks, or educational complexes.¹⁵

The justification for establishing such an educational complex of buildings is to bring students from much larger residential areas together into one school plant and hence make it possible for the district to maintain a much more representative and desirable mixture of students on the basis of social, economic, racial, ethnic, and similar characteristics. The plaza offers educational programs that begin often at the three- or four-year age level and usually at the kindergarten level and extend through the postsecondary level of community college or vocational and technical educational programs. The plaza may be established on a single plot of land or it may actually be located on a number of sites in close proximity but not necessarily contiguous.

In 1968, the New York City Board of Education began the construction of its first education park. It consists of five schools designed to house 10,400 students. The park will include one four-year high school, two intermediate schools, and two primary schools. The board of education announced subsequently that three other education parks are in the planning stage.¹⁶

¹⁴ Weinberg.

¹⁵ For excellent reports on the educational park plan of school organization, see Max Wolff and Alan Rinzler, *The Educational Park: A Guide to Its Implementation*; and Max Wolff and Benjamin Rudikoff, *The Educational Park: A Survey of Current Development, 1969 with a List of Reports and References* (New York: Center for Urban Education, 1969 and 1970).

¹⁶ School District of the City of New York, *The Educational Park: What Should It Be?* (Brooklyn, N.Y.: The School District, 1966); and Frederick Shaw, "The Educa-

Broward County, Florida, has developed the South Florida Educational Center near Fort Lauderdale. On a site of approximately 320 acres, the county has built an elementary school, a high school, a junior college, and hopes, in time, to add a university which would be a part of the state system of higher education. East Orange, New Jersey, is in the process of developing a single educational complex that will constitute the entire educational facility for that community.¹⁷

The Syracuse, New York, school district has plans that would eventually result in four large school complexes, each with eight buildings housing about 500 pupils each and a central core building for educational services and common facilities. When the project is completed, all existing elementary schools in the district will be eliminated.¹⁸

But it should be noted that enthusiasm for the educational park idea waned markedly by the turn of the decade; and Pittsburgh, among other school systems, announced plans to abandon such a development, at least for the time being.

On the other hand, a counterdevelopment to the educational complex is the apartment-house or all-unit housing complex school. In such an arrangement, a large apartment building or a complex of housing, business, and service buildings has its own school built as an integral part of the building or building complex. For example, the first few floors of a huge apartment building may house a preschool and the kindergarten-grade 3 of the elementary school for children of that building. The school facilities are used in nonschool hours by the adults of the building for other purposes. In other arrangements, a complete school, preschool through high school, may be housed in a complex of buildings that includes apartments, business establishments, service and professional offices, and even industrial facilities. The school becomes an integral part of the lives of the people living and working in the complex, being used not only for formal schooling, but leisure activities, adult study programs, entertainment, and similar activities. Obviously, such programs are now only feasible in large cities, and some beginnings on these types of schools have been made in New York. But in the decades ahead, it is possible that whole new communities of this type may be developed in what is now open country. Such developments, obviously, would call for new types of programs for the education of teachers and administrative personnel who serve such centers.

tional Park in New York: Archetype of the School of the Future." *Phi Delta Kappan* 50:329-331 (February 1969).

¹⁷ "The Education Plaza: Death Knell for the Neighborhood School?" *School Management* 10:102-105 (October 1966).

¹⁸ David F. Sine, "Educational Parks," *NEA Journal (now Today's Education)* 57: 44-47 (March 1968).

Highlights of the Historical Development of Secondary Education In the United States

To provide perspective and an understanding of the character and nature of secondary schools as they have evolved in this country during more than three and a third centuries, we will trace briefly their historical development and then analyze the significant forces and factors that have shaped the character of secondary education as we know it today.

The early settlers came largely from England, so it is natural that they adopted the existing pattern of education prevalent in the mother country at that time. The rudiments of reading, writing, and arithmetic were taught largely in parish schools, in the home by the parents, in the neighborhood in what came to be called dame schools, or by the master for his apprentices. The formal school was at an advanced level, designated as a grammar school. It was exclusively for boys from about the ages of eight to fifteen; the instruction was in Latin and Greek. This was the type of school that the Puritan settlers in Boston voted to establish on April 13, 1635. At a town meeting, the citizens requested that Philemon Portmont, one of their fellow settlers, serve as schoolmaster for their young sons. Inasmuch as the instruction was devoted to Latin grammar and Latin literature and the school offered more advanced instruction, it was, in time, designated as a Latin Grammar school, although the original founders did not give it that name.

The Latin Grammar school became the model for similar schools in other New England colonies, and the records indicate that there were at least 26 such schools in the Colonies by 1700. The earliest records reporting the course of study for the Boston Latin Grammar school show that in 1712 there was a seven-year program devoted to the reading and study of Erasmus, Cicero, Ovid, Horace, and other authors in Latin along with the New Testament, Isoerates, Homer, and Hesiodus in Greek.

Although the school was not public in the sense of a governmentally controlled and tax-supported school of today, it was operated under the general control of the town meeting which served as a governing body of the community. Support came from donations and a number of communities set aside some of their public land from which the rent was devoted to payment of the salary of the schoolmaster.

The Period of the Academy

Frederick Jackson Turner, the eminent interpreter of the frontier in American history, points out in his brilliant essay, "The Significance of the Frontier in American History," as restated by Avery Craven:

The basic idea developed in this essay, and repeated in later ones with variations and additions, was that American history, through most of its

course, presents a series of recurring social evolutions in diverse geographic areas as a people advance to colonize a continent. The chief characteristic is expansion; the chief peculiarity of institutions, constant readjustment. . . . The final result, as area after area was occupied from the Atlantic to the Pacific, was the Americanization of both men and institutions in the sense that they were better adjusted to their environments and had altered their original character.¹⁹

Certainly, this generalization by Turner is applicable to the development of schools and educational systems in the United States down to the present day. In the history of secondary education, we see this effort of the American people to adjust and readjust constantly their schools to changing circumstances of American life.

The Academy represents the third major effort to readjust the system of schooling to the new conditions of colonial life. The second effort, somewhat minor in nature and significance, but, nevertheless, a forerunner and clear indicator of what was to follow, was the establishment of the private venture schools throughout many of the colonies during the early part of the eighteenth century. In these private venture schools, individuals simply let it be known, sometimes through advertisements, that they would offer instruction in not only the rudimentary subjects but also in subjects required in such occupations as navigation, surveying, horticulture, and the like. In fact, many of these private school masters offered instruction in Latin and Greek and such subjects as mathematics, natural philosophy, and metaphysics. Some of them offered to prepare pupils for admission to the colleges. Sometimes these proprietary schools would even designate themselves as English grammar schools.²⁰

The private venture schools of the early part of the eighteenth century should not be regarded as secondary schools, for they were simply private ventures by individuals who instructed for a livelihood just as even to this day many youngsters take their first lessons in music from private instructors who offer piano lessons in their home or in a personal studio. Nevertheless, we should recognize that these private venture schools filled a gap in the educational system of the day, and undoubtedly served to hasten the establishment of the academy and to win support for this more practical type of secondary school.

Benjamin Franklin is the father of the academy. In 1749, he published a paper entitled, "Proposals Relating to the Education of Youth in Pensilvania." Franklin wanted to establish a school in which the pupils

¹⁹ Avery Craven, "Frederick Jackson Turner," *The Marcus W. Jernegan Essays in American Historiography*, William T. Hutchinson, ed (Chicago: The University of Chicago Press, 1937), pp. 254-255.

²⁰ Robert Francis Seybold, *Source Studies in American Colonial Education. The Private School*, Bulletin 28, Bureau of Educational Research, University of Illinois, College of Education (Urbana: The University, 1925).

"learn those Things that are likely to be most useful and most ornamental, Regard being had to the several Professions for which they are intended." It was Franklin's feeling that "it would be well if they could be taught every Thing that is useful, and every Thing that is ornamental; but Art is long and their Time is short."²¹ Franklin felt that what was needed was a school that was more practical by far than the Latin Grammar school, yet he did not want simply a vocational school in any sense of that term. As a matter of fact, he proposed that Latin and similar subjects be retained in the program of the school but that the Academy be organized in two divisions, the Latin and the English, each under a separate master.

The heyday of the academy was roughly from the period of the Revolution to the Civil War. Sizer states that "thousands of academies of one type or another sprang up during these eight decades; one observer counted six thousand in 1850 but he was probably conservative in his estimate."²²

The Establishment of the American High School

What is now regarded as the first public high school in the United States was established by action of the Boston town meeting on January 15, 1821. The school opened in May 1821 with a membership of 102 pupils. In the recommendation made by the school committee to the citizens of that city, the school was called the "English Classical School." In action of the Boston school committee in 1824, the school was redesignated as the "English High School."

The arguments advanced by the Boston School Committee for the establishment of this new type of school were basically three. One, the committee felt that the kind of education available to the children of Boston in the existing schools and in the higher level of these schools, which was usually designated as an English Grammar school, was too elementary and represented a waste of two years of time. The report states: "The mode of education now adopted, and the branches of knowledge that are taught at our English grammar schools are not sufficiently extensive nor otherwise calculated to bring the powers of the mind into operation nor to qualify youth to fill usefully and respectably many of those stations, both public and private, in which he may be placed."²³

Secondly, the school committee pointed out that parents who did wish the kind of education for their child that would fit him for life were

²¹ Benjamin Franklin, "Proposals Relating to the Education of Youth in Pensilvania," *The Age of the Academies*, Theodore R. Sizer, ed., Classics in Education No. 22 (New York: Teachers College Press, 1964), pp. 70-71.

²² Sizer, p. 1.

²³ Elmer Ellsworth Brown, *The Making of Our Middle Schools* (New York: Longmans, Green & Company, 1902), p. 299.

forced to send him to a private academy, thus separating the youth from the family and subjecting the parents to heavy expense for such an education.

The third reason stated by the committee for recommending the establishment of this new English classical school was "to render the present system of public education more nearly perfect."

The establishment of this new type of public high school was slow and uncertain at first but the movement gained ground and by 1860 the high school had been fully accepted as a part of the American educational scheme. The state of Massachusetts had passed its landmark law on secondary education on March 10, 1827, in which it required every city, town, or district with 500 or more householders to maintain a school which taught the subjects associated with the Boston English High School, although it did not refer to the school as a high school.

Similarly, the state of Pennsylvania, in 1834, passed a law that designated all existing wards, townships, and boroughs as school districts and required each of these districts to decide by the fall of 1834 whether it would organize free schools for the children of the district. Again, the law did not specify that high schools must be established, but it did provide the base for the development of the free high school system in Pennsylvania, with the first one, Central High School (still in existence) being established in Philadelphia in 1837.

In 1904, the United States Commissioner of Education attempted to get evidence on the establishment of the American high school by sending questionnaires to 7230 public high schools known to exist at that time. Tabulation of these data shows that 321 high schools had been organized by 1860; by the school year 1889-1890, 2526 were in existence; and by 1904-1905, the number had reached a fantastic total of 7230. However, it should be remembered that many of the communities reporting high schools offered as little as one year of high school work and many only two or three years. Nevertheless, it was clearly evident by the last quarter of the nineteenth century that the public high school had superseded the academy as the dominant institution of secondary education in this country and that its acceptance by the people and subsequent growth would indeed be phenomenal.

The High School in the Twentieth Century

If the last part of the nineteenth century is the period during which the American high school emerged as an essential part of the program of education for the children and youth of this country, the first two decades of the present century was the period during which the basic purposes and functions of this unique institution were defined. The ensuing five decades were the period during which the educators of the nation, in conjunction

with parents and other citizens, endeavored through many approaches both in structure and program to develop a program of secondary schooling that would best serve the educational needs of all of the children of all of the people of the nation. And the nation is still deeply concerned about the nature and character of the program. Inasmuch as the remainder of this book is devoted to secondary education as it exists today, only a few highlights of its historical development during the present era will be noted here.

Salient steps in the definition of purposes and functions. During a period of a quarter of a century, beginning in 1893 and terminating in 1918, the conception of secondary education that is the basis for our program today was formulated. In 1893, the Committee on Secondary School Studies, popularly known as the Committee of Ten, issued its famous report on secondary schools. It had been appointed by the National Education Association to study the matter of college entrance requirements, but it saw the necessity, first, of determining the functions and purposes of the high school. In its report, it stated that the main function of the secondary schools "is to prepare for the duties of life that small proportion of all the children in the country—a proportion small in number, but very important to the welfare of the nation—who show themselves able to profit by an education prolonged to the eighteenth year, and whose parents are able to support them while they remain so long in school. . . ."²⁴

The American high school was clearly intended in its origination to be an extension of the grammar school and an institution that would offer instruction, "adapted . . . to their future pursuits in life." It was to be a practical school, designed to serve the educational needs of the older children and adolescents of a community of whatever nature these may be—preparation for the colleges and universities, business pursuits, agricultural pursuits, or professional pursuits. The high school resulted from the efforts of the people to develop a higher school program that would serve in general the youth of the community in contrast to the small group that had been served by the classical Latin Grammar school or was being served by the academy, which was tending more and more to become a college preparatory institution in its own right and restricted to a select group who could afford the costs of a boarding school or tuition day school.

Thus, we see again, as Turner points out, that the American people continuously adapted their political and social institutions, in this instance, schools, to the changing needs of the times and to new conditions and factors emerging in the life of the people in their communities.

²⁴ Committee on Secondary School Studies, *Report* (Washington, D.C.: Government Printing Office, 1893), p. 51.

The Committee, in the remainder of its report, presented a recommended program of studies that it felt would properly fulfill this function of preparation for life of that small proportion of students who could profit from such academic studies. The four-year program of offerings was to include four years of Latin, three years of Greek, four years of either French or German, and three years of the other language, four years of mathematics, four years of history, four courses in science, and one course in applied geography.

Thus, this Committee advocated a program of classical humanism as the best kind of program for the education of the select few who should be enrolled in the high schools of the United States.

But contention over what truly should be the nature and character of American education ensued immediately and for the next 25 years the matter was a subject of great debate and discussion, particularly in educational circles but also throughout American society. Because of the opposition to the report of the Committee of Ten and the demands of public school educators that a broader conception of secondary education be developed, the National Education Association set up a succession of committees during this period to study the problems of education.

These debates and discussions eventually resulted in the famous report of the Commission on the Reorganization of Secondary Education, published in 1918, and entitled *The Cardinal Principles of Secondary Education*.²⁵ The dramatic change in the conception of secondary education and its functions and purposes that resulted from these discussions and committee reports is illustrated by this statement by the Commission in 1918 of the basic purpose of education: "Education in a democracy, both within and without the school, should develop in each individual the knowledge, interests, ideals, habits, and powers whereby he will find his place and use that place to shape both himself and society toward ever nobler ends."²⁶

To carry out this function of education the Commission defined the main objectives of education as:

1. Health
2. Command of fundamental processes
3. Worthy home-membership
4. Vocation
5. Citizenship
6. Worthy use of leisure time
7. Ethical character²⁷

²⁵ Commission of the Reorganization of Secondary Education, *Cardinal Principles of Secondary Education*, U.S. Office of Education, Bulletin 1918, No. 35 (Washington, D.C.: Government Printing Office, 1918).

²⁶ The Commission, p. 9.

²⁷ The Commission, pp. 10-11.

These constitute the renowned "Seven Cardinal Principles of Secondary Education."

The contrast between the conception of education and the purposes of the secondary school as stated by the Commission on Reorganization of Secondary Education and those stated by the Committee of Ten 25 years earlier is illustrated by this point of view of the Commission:

To the extent to which the objectives outlined herein are adopted as the controlling aims of education, to that extent will it be recognized that an extended education for every boy and girl is essential to the welfare, and even to the existence, of democratic society . . . education should be so reorganized that every normal boy and girl will be encouraged to remain in school to the age of 18, on full time if possible, otherwise on part time.²⁴

Thus, secondary education should be universal, and it should prepare each citizen to carry out effectively and significantly those seven life activities so essential to social living.

It was during these first three decades of the present century that the comprehensive type of high school, defined earlier in this chapter, was developed. The Commission itself was a strong advocate of comprehensive high schools, and this conception of the secondary school remains the accepted pattern today.

Secondary education since 1920. The remainder of this book will be devoted to an analysis of recent development in the high schools of America and to changes that have been made and should be made in the program of education for the youth of this nation. But here we will continue briefly our historical account of significant developments in the evolution of the high school as it exists today.

The five decades beginning with 1920 are characterized by the continued rapid growth of the secondary schools, the phenomenal rise in the extent to which young people of appropriate age groups attend secondary school and graduate from high school, and the tremendous expansion in the curriculum and program of the secondary schools. Efforts to define more fully its purposes and functions and to translate these views into practice, major efforts, beginning in the 1920s and continuing unabated, except for some slowing down during World War II, to design, try out, and adopt new types of programs, redesign existing curriculum plans, and introduce promising innovations in the schools, and steps to provide much more truly both in terms of organizational and administrative structures and in program equality of educational opportunity in the full meaning of that concept in American education are evident.

²⁴ The Commission, pp. 29-30.

Chapter 3 presents data on the rapid growth of secondary schooling in this country. Enrollments in the high school grades (9-12) doubled each decade from 1890 to 1930, at which time about half of the appropriate age groups were enrolled in high school. Thereafter increases in the percent attending continued, except during World War II, with almost all youth entering high school today, and more than 75 percent of them graduating. In terms of numbers this has meant increases in enrollment of up to half a million students a year during some periods of rapid expansion. The problems inherent in providing buildings, teaching staffs, equipment, books, and, more importantly, appropriate courses and programs for these ever-expanding student bodies are evident.

The school staffs, supported, and, sometimes, forced by parents, earnestly endeavored to develop an educational program that would serve "all American youth." The dominating educational theme of the late 1920s and 1930s was "educate all of the children of all of the people," and the basis for planning an appropriate program was the concept that "these are the only children the parents of the community have" so the school's program, it was advocated, must be adapted to the educational needs of youth, and not vice versa. The American people accepted secondary schooling as the basis for social mobility upward, occupational and economic success, the Americanization of the children of the millions of immigrants that came to our shores in the latter part of the nineteenth century and the first two decades of this century, and as essential for adequately fulfilling the responsibilities of citizenship and for enjoying fully the rewards of the American dream. They demanded that the secondary schools fulfill these functions.

Curriculum planning, curriculum innovation, and experimentation with new approaches to education have characterized the entire five decades under consideration, although in different contexts, and with different points of reference at various times during the past fifty years (Parts II and III describe significant current developments in curriculum and instruction). Early efforts were directed to the "popularization" of secondary education, although the citizens of the 1920s seldom had to be "sold" on support in general of the high school. The program of offerings was gradually broadened, especially aimed at fulfilling the cardinal principles of secondary education envisioned in the 1918 report. Extracurricular activities, especially athletics, bloomed profusely in an effort both to provide additional opportunities in school to serve a broader range of interests and capabilities and also to make high school a pleasant, enjoyable, exciting experience for youth—one which would attract and hold the youngsters in school, particularly those that come from the meager, often intellectually impoverished home conditions of the farm family, the small town shopkeeper and handyman, or the factory worker and craftsman of the city. Negro children in those days were given short shrift in the schools, with legal and de facto segregation the usual situation.

Beginning in the late 1920s and blossoming in the 1930s and 1940s were efforts to reform significantly the curriculum of the school and accompanying methods of teaching. This is the heyday of what was designated generically as "progressive education." John Dewey's tenets of interest and effort in education and education as development, and new psychological theories of learning had great impact. So did greater concern than ever for the socialization of the individual, particularly his ability to be an effective citizen, and the demands of citizens and educational leaders alike that secondary schooling be "practical." These factors and the revulsion of better trained and more sensitive teachers against the rigidity, formalism, harsh discipline, and archaic subject matter of the school of the nineteenth and early twentieth centuries laid the philosophical, psychological, and methodical basis for the innovations lumped later under the rubric of "progressive education." A core of the educational program was organized around social functions of living, life activities, needs of adolescence, or major social problems. This core was designed to provide general education for the students, replacing for this purpose separate subjects in English and social studies and broadening the program to include some experience in the arts, music, science, and computation.

Although these core programs and similar experiments with the curriculum were never adopted by a large portion of the secondary schools, they did have an important impact on the subject curriculum in general, resulting in the introduction of an array of new single subject courses, such as consumer education, driver education, family living, problems of American democracy, general business, general mathematics, consumer science, general science, music appreciation, and the like. The movement also resulted in reforms in the content of the traditional courses of the high school. The literature studied in English was selected for its interest to the students enrolled, not its classic prestige; in mathematics archaic, stilted problems included simply as mental exercises were eliminated; history was treated more from the standpoint of causes and consequences than a chronology of events; home economics included child care, family living, health care, home management, and the like; and science was more selective in the concepts and principles included.

But following World War II, and gaining momentum in the mid-1950s, dissatisfaction with such a program of secondary education on the part of parents, citizens, and many educators became increasingly vocal and pointed. New reforms to reform the reforms were demanded. The general complaint was that the secondary school, both at the junior and senior high school levels, was not adequately providing for the education of all of its students. In their almost crash efforts to popularize the high school in earlier decades, the educators were said to have "watered down" the program, lowered the levels of accomplishment expected of students, and geared the entire program and practice to the "average" student, failing, rather miserably some thought, to provide a proper education for

each student, especially if he was intellectually talented or was to enter college. Moreover, criticism welled up from scholars and specialists in the disciplines and other traditional subject fields that the content being taught was not properly chosen to educate students with high levels of interest and ability in a field, or even to serve the purposes of general education for all students.

Hence a great wave of educational reform has swept through the secondary schools of this nation since the mid-1950s. Significant changes in program, organization, structure, and instruction have occurred and many are still being tried out in experimentally-minded schools. These developments and the present status of the program of secondary education are treated extensively in this book.

But progress is not being made in so gratifying a manner on a major concern of secondary educators and many citizens—the provision of true equality of educational opportunity for all youth and young adults. In Chapter 8 we treat in detail a large number of promising efforts to individualize the high school's program, but serious shortcomings still exist in other aspects of equality. The most serious one is segregation in the schools of youth on the basis of race. After a long and shameful history of legal segregation in schools that were presumably "separate but equal," the Supreme Court of the United States in 1954 ruled that the separation of students in different schools on the basis of race could never result in equality of opportunity, no matter what other provisions are made for schooling.

Other manifestations of inequality, although minor in character in comparison to racial segregation, are the limitations of small high schools with very inadequate educational programs in rural and village districts, poorly financed high schools in poverty-stricken communities or in sections of urban districts, often no schooling of any kind available for children of migrant workers, and inadequate programs or none at all for youth with exceptional needs, such as the physically disabled, the mentally retarded, the trainable, but noneducable, the emotionally disturbed, abandoned youth, or those who are wards of the state or committed to penal or other types of institutions.

Providing true equality of educational opportunity is, of course, a very difficult matter; it requires a valid definition of what constitutes equality and then a broad scope of programs that would make the appropriate kind of education available to each person. But the types of inequality discussed above are such obvious examples, and so serious in nature, that the nation must get on with the task of solving the problem.

Two other developments of great significance are evident in the post-World War II period—the phenomenal growth of postsecondary educational institutions and the huge expansion in support of the educational enterprise by the federal government. The more traditional junior

colleges and community colleges and a variety of types of vocational and technical institutes—newer approaches to the education of young adults—have been established in great numbers throughout the nation, and the tremendous expansion in enrollments, numbers, and size of four-year and graduate-level colleges and universities all attest to the "explosion" in higher education. Enrollments in all collegiate institutions (not including noncollegiate technical and vocational institutions of various types) grew from 2 million in 1946 to more than 7 million in 1970.

Federal support for education from Head Start for three-to-five-year-olds to graduate education has increased markedly since 1950. Some federal aid was available prior to that date, originating in land grants before the federal constitution was adopted, but the only additional support for common schools until the war period was for vocational education, and that in only very limited amounts. By 1970, federal support for educational activities was more than 13½ billion dollars (compared to 291 million in 1945), and direct grants by the federal government to schools and colleges was \$8,381,300,000 (compared to \$102 million in 1945).

These have been challenging but exciting times for teachers, administrators, and other people concerned about the schooling of youth. This period of educational history may emerge in centuries to come as one of the great periods of development of a program of education for all.

Factors That Have Shaped the Character and Nature of Secondary Education in the United States

To understand the nature and character of secondary education in the United States today, we should examine the forces and factors in our national life that have shaped the program throughout the history of public education in this country. We will discuss briefly what we consider to be the major factors in American life that resulted in the constant readjustment and adaptation of our program of education to the changing nature of the times and that have produced the present system of secondary education, a system that evolved historically as a unique and radically different conception of education than that prevailing in other nations of the world.

Precedent and Tradition

It has already been noted that the early colonists established schools similar to those with which they were familiar in England. This is illustrated by the establishment of the original school by the Puritans in 1635, which later became known as the Boston Latin Grammar school, the laws relating to the training of apprentices, and the establishment of

reading and writing schools for the teaching of the rudiments of learning. These institutions were adapted to changing conditions over a period of time, but, nevertheless, the model for the original institutions, and even for some of the changes, were based on practices in European countries.

Undoubtedly, Franklin drew on his knowledge of education in England in formulating his proposal for the academy. Although the Boston committee in 1821 pretty much formulated its own ideas for a higher level of education that they chose to call the English Classical school, the name "high school" apparently was adopted as a result of an article by John Griscom in a Boston journal in 1824 describing in glowing terms the Edinburgh, Scotland, high school, an institution that had already had a long and distinguished history in that country.

Other aspects of our educational program are also modeled on European practices, particularly the establishment of the graded system of instruction, which had been developed and was widely used in German schools. In the latter half of the nineteenth century, American school systems emulated the example of German cities in establishing kindergartens, particularly following the plans developed by the German educator, Friedrich Froebel.

The normal school, as it was known in France, and the teacher seminaries as they were labeled in Germany, became the model for teacher education in this country and resulted in the establishment by the state of Massachusetts of the first normal school for the preparation of teachers.

Manual training and vocational education also constitute imports from European countries. The first work in manual-training instruction in the schools was offered in Finland, and later Sweden and Russia both established and were highly instrumental in fostering manual training in the schools. Vocational schools were established by European countries long before such programs were offered in America.

The American people, prompted and urged by their educational leaders, have been willing to seize on ideas and plans developed by other countries of the Western world whenever they felt that their adoption would provide a better program of education for the children of this country. But, in turn, they themselves have also been inventors, particularly in the establishment of the American high school.

An analysis of the history of education in this country shows that the school system of today has evolved gradually as a result, as Turner points out, of adaptations to changing social, political, and economic conditions. The extensive innovations and experimental programs and new administrative structures tried out in the schools of this nation during the last decade also illustrate the extent to which schools can free themselves from the debilitating effects of tradition, and continuously seek to adapt, adjust, and reorganize the educational system so it better serves the people of each succeeding generation.

Ecological Factors

Robert Cooley Angell²⁹ has discussed brilliantly the fact that social institutions are the product of the interaction of the moral values and beliefs of a people and ecological factors. This, it seems to us, states major forces that have shaped the nature of the educational system, particularly secondary schools, in the United States today.

The chief ecological factors influencing the development of schools have been the existence of free land, the fabulous resources available in these new lands, and the recurring nature of pioneer life in America as the nation expanded westward.

It is these conditions of frontier life that are embedded in the American character and morality, particularly the extreme spirit of individualism, self-reliance, and self-initiative, and a pride in courage, venturesomeness, and self-determination. The nature of frontier life itself precluded any attempts to develop sharp class distinctions, set one group apart with privileges different from those of another group, or establish a peerage, or ruling class. Indubitably these traits would be reflected in the nature and character of the educational system the pioneers established for their children, and establish schools they did almost as soon as they had built their own homes and cleared the forest or broke the sod.

But from our vantage point of today, we must acknowledge one glaring deficiency in the development of social institutions that exemplified the spirit of American democracy—the utter failure to include the Negro in the rewards of American life. Slavery was an aspect of the moral and ecological webs of which Angell writes, but in this instance constituted a detrimental factor that resulted in educational, political, social, and economic institutional arrangements that eventually revealed our failure to develop schools that truly enabled all citizens to be the beneficiaries of the American dream. And the institutionalization of earlier aspects of slave life has resulted in what we all must surely recognize as one of the most serious problems facing citizens today. As is discussed more fully in Chapter 3, discrimination because of race and ethnic origin not only in the types and nature of schooling provided but in housing, jobs, health, care, and other aspects of living has seriously affected the education of a significant portion of the youth of America.

Political Factors

The political institutions Americans established grew out of the spirit and character of pioneer life—individualism, independence, self-reliance, self-determination, equality, and abhorrence of special privilege.

²⁹ Robert Cooley Angell, *Freedom and the Moral Crisis* (Ann Arbor: University of Michigan Press, 1957).

With respect to schools, the people from the very first town meeting in 1635 in Boston had exercised control over the establishment and government of their schools. Although the secondary schools of colonial America, such as the Latin Grammar school and the academy, were not strictly public in the sense of public control and tax support, they were governed by the citizens of the town through the town meeting, or by boards of trustees usually representative of the people of the community or of the church group that established the academy. Later, control of public schools was, of course, vested in public authorities. Many authorities insist that the local school district remains the best example of democratic government. Having opportunity to be heard at the meetings of the board of education, to discuss the school budget at open hearings, to vote directly on members of the board of education in local elections, and to use the informal techniques of discussion, petition, remonstrance, and even demonstration in support of their points of view enables citizens to exercise a large measure of control over the schools.

Social Factors

One of the most significant sociological forces that has shaped the character of American secondary education is the cosmopolitanism of the people. All Americans, except the native American Indian, are immigrants or descendants of immigrants, including the Negro slaves brought to America as a part of that ignoble aspect of American life. These immigrants came from practically every nation of the world. Schools have been the major agency by which the citizens of this country have endeavored to fuse this tremendous mixture of nationalities and ethnic groups into a great nation of people with a common American culture and ideals.

To the farmer, the industrial worker, the miner, the businessman, the small-town merchant, the handyman, the railroad section hand and track walker, the struggling widow with a brood of children—Americans all—the secondary school was the opportunity for their offspring to realize their own potentialities and to share in the riches of this great country. Social mobility was possible through education and personal adherence to the Puritan virtues of hard work, industriousness, Christian living, and ambition. Unless, unfortunately, you were black, or an American Indian, an Oriental, or of Spanish-American origin.

Urban and Technological Factors

The urbanization of America has also been a major force, particularly in the twentieth century, in shaping the character and nature of the secondary school.

Urbanization meant a more complete interdependence of peoples and

a reliance of everyone on the contributions of other segments of the population for his own modes and methods of livelihood and the maintenance of his own standards of living. This situation obviously necessitates a well-educated people who can carry on, support, and advance a society so completely dependent on each other for their own well-being.

But urbanization and the concentration of great masses of population in metropolitan areas also resulted in slums and ghettos and created large clusters of socially, economically, and politically deprived people who, unlike the enthusiastic, energetic, dreamy-eyed immigrant of previous generations, were frustrated, defeated, alienated, sullen, and bitter. The schools in these areas now faced markedly different conditions and challenges, for no longer did the slum dweller see them as a vehicle for personal development and, particularly, social mobility and economic advancement, as had earlier generations of urban dwellers. Under these new sets of conditions, the school no longer single-handedly could guarantee the children of its neighborhood the privilege of achieving the American dream, or, often, even a small portion of it.

Research and the Scientific Spirit

Research, particularly on matters of educational practice and structure, is largely a development of the twentieth century and such inquiry did not have any marked influence on schools until after the second decade of the century. Nevertheless, research findings have been an important factor in shaping present-day educational practice and program in this country, particularly at the secondary school level.

A new psychology, presented ably in the works of such eminent scholars and researchers as William James, Edward Lee Thorndike, Robert Woodworth, Charles Judd, G. Stanley Hall, and others, provided a radically new concept of the learning process and laid the foundation for the introduction of many new practices and procedures in teaching and for the reorganization of the school program.

Research on the measurement of intelligence, carried out by Alfred Binet and T. H. Simon in France, and Lewis M. Terman, Rudolph Pintner, Thorndike, Truman Kelley, and L. L. Thurstone in this country, provided a means for determining the capabilities of children to succeed in academic pursuits in school. Tests of intelligence began to be used widely in American education and became the basis of many school practices and developments in educational organization and administration, particularly in grouping and grading pupils, and also in selecting content for study by children at various grade levels.

Similarly, standardized tests of achievement have had a significant influence on school programs. The testing movement began as early as 1902, when Thorndike published the first book on the subject, and since

then testing has been widely used in the classrooms of the nation, culminating in recent efforts to make a continuing national assessment of educational progress among the children and youth of the nation.

Another type of research that had an important bearing on educational development in this country was the school survey. The school survey movement started about 1910, and this approach to the study of educational practice and curriculum continued to be a major influence on schools, particularly during the 1920s and 1930s, being still a widely used method of investigating school practices and procedures and for recommending changes in the program of education.²⁰

Another type of survey that also had considerable influence on educational thinking as well as practice was the study of the accomplishments and educational attainments of pupils. The most telling of all these studies was the highly significant investigation in which George Counts presented convincing data on the selective nature of American secondary schools in the 1910s and early 1920s. His evidence provided strong support for a much broader and comprehensive program of secondary education that would prove more attractive to the great mass of young people and thus encourage them to remain until graduation.²¹

Beliefs and Philosophical Factors

Obviously, what the people who establish and control schools believe about the nature, purposes, goals, functions, and objectives of the school is a major factor in shaping the nature of the educational program.

In the evolution of the American system of schooling, two major sources of philosophical beliefs and concepts about the nature of education and the purposes and structure of schools were evident: (1) the workaday points of view, demands, and concepts about education of citizens generally; (2) the philosophical ideas and concepts of our great educational scholars and leaders, who spoke out clearly and emphatically throughout the history of this nation about the nature and character of education and the system of schools that should be developed.

Our unprecedented system of vesting a large measure of control over the operation of the schools in a local board of education for each school district, a board usually chosen by its fellow citizens in the community, enhanced the privilege of the ordinary citizen to make his views

²⁰ Recent examples are the extensive surveys of the school systems of Chicago and Washington, D.C. See Robert J. Havighurst, *The Public Schools of Chicago* (Chicago: The Board of Education of the City of Chicago, 1964) and A. Harry Passow, *Toward Creating a Model Urban School System: A Study of the Washington, D.C. Public Schools* (New York: Teachers College, Columbia University, 1967).

²¹ George S. Counts, *The Selective Character of American Secondary Education* (Chicago: University of Chicago Press, 1922).

about education and the kinds of schools that should be provided in the community felt in governing circles.

But the role of our great educational statesmen and scholars in giving direction to the program of education is apparent from a careful study of the history of education in this country. A mere listing of some of these persons establishes the validity of this statement: Benjamin Franklin, Thomas Jefferson, John Adams, Horace Mann, Henry Barnard, William T. Harris, Charles Eliot, William James, John Dewey, Charles Judd, George Counts, and Boyd Bode.

As is well known to any student of education, it was undoubtedly John Dewey's writings and teachings during the first four decades of the twentieth century that indelibly established the basic philosophical ideas that undergird and pervade educational practice today.⁵²

The School as an Agent of Society

Over and above all of the factors influencing the development of the American high school discussed in this section is the inexorable control which the American people as a social group exercised over its schools. Three eminent authorities provide excellent statements of the nature and character of this control.

The historian, Henry Steele Commager, after reviewing the historical development of the high school, wrote:

It is the most hackneyed of observations that schools are a function of society, but we should keep in mind that, as American society differed profoundly from European in the eighteenth and early nineteenth centuries, the functions imposed upon schools differed profoundly from those which older societies imposed upon their schools. The story is familiar, and I need not rehearse it: how, especially in the nineteenth century, we required our schools to train citizens competent to govern themselves (a requirement not urgent in the Old World), to absorb and Americanize millions of newcomers from the Old World and elsewhere, to encourage and strengthen national unity, and to teach the habits and practices of democracy and equality and religious tolerance.⁵³

And two sociologists, Robert E. Herriott and Benjamin J. Hodgkins, drawing on a research study they made, conclude that:

⁵² Lawrence A. Cremin has written a brilliant analysis of Dewey's influence on the nature and character of the American education in two of his recent works, *The Transformation of the School* (New York: Alfred A. Knopf, 1961), Chaps. 4 and 5; and *The Genius of American Education* (New York: Random House, Inc., A Vintage Book, 1965).

⁵³ Henry Steele Commager, "A Historian Looks at the American High School," *The High School in a New Era*, Francis S. Chase and Harold A. Anderson, eds. (Chicago: University of Chicago Press, 1958), p. 5.

If the logic of our model holds, significant changes in the structure and functioning of the American public schools are greatly dependent on the sociocultural context in which the school exists. . . .

Perhaps even more important are the implications related to the old argument of the school's role as an agent of change within the larger American society. The issue must be recast when the school is viewed as an open social system, for within such a framework there is a high degree of reciprocity between school and environment. However, this reciprocity is severely constrained by the ideology and values dominant in the socio-cultural context in which the school is controlled. We would argue that the community probably permits the school to be a change agent only to the extent that it wants to be so changed.²⁴

Salient Features of the American Plan for Secondary Education

The secondary school of today is the result of the gradual evolution over a period of three and a third centuries of a program of education that would uniquely serve the educational needs, expectations, and demands of the American society as it itself has ever evolved throughout our history. As a result of the ecological, demographic, and habitat conditions that have prevailed in this country, the moral values and beliefs of the American people, their concepts of the functions and purposes of schools and the place of education in our national life, and the complex multiplicity of factors that have shaped the nature and character of our government and our social institutions, particularly the schools, we now have, in this nation, a system of schools that contrasts in a number of unique characteristics with the educational systems of other nations of the world.

In recent years it is true that some nations have adopted certain aspects and features of the American system of education, just as the people of this country in centuries past have drawn on European experience in the development of our schools. The uniqueness of the American system is, in part, now being minimized by a greater uniformity in structure, practices, and programs among nations of the world. Nevertheless, it is still valid to describe what have been historically the salient features of the American system, which, to this day, still in large measure have some degree of uniqueness, but which certainly have constituted guidelines for developments in some of the other countries.

The unique features of the American program of secondary education are:

1. *Schooling is available to all children.* Although fully equal educational

²⁴ Robert E. Herriott and Benjamin J. Hodgkins, "Social Context and the School: An Open-System Analysis of Social and Educational Change," *Rural Sociology*, 34:163 (June 1969).

Additional Suggestions for Further Study

1. Conant, James B., *The Comprehensive High School*. New York: McGraw-Hill, Inc., 1967. Conant followed up his first report on the American high school (see footnote 4) with a questionnaire survey of all 18,500 schools in 1967, to which 80 percent responded. This book reports many facts about the high school as it existed at that time, as well as many of Dr. Conant's own observations and recommendations. Required reading for students in secondary education.
2. Counts, George S., *Education and American Civilization*. New York: Teachers College Press, 1952. An outstanding study of the social, cultural, and moral foundations of American schools. The author analyzes in historical perspective the significant aspects of the American culture and then presents his ideas on the program of education such a nation must have to perpetuate its moral ideals.
3. Durkheim, Emile, *Education and Sociology*. New York: The Free Press, 1956. The English edition of his earlier classic work on the social basis of education. Durkheim views education as the means by which a society perpetually renews the very conditions of its existence. Durkheim sees the school as a social agency for unification of a nation and for developing moral consensus. Provides the best understanding available of the control of the school by the social group as a means of national survival.
4. *Encyclopedia of Educational Research*, 4th ed., Robert L. Ebel, ed., 1969; and 3d ed., Chester W. Harris, ed., 1960. New York: Crowell-Collier and Macmillan, Inc. The articles under the title "Secondary Education" in both editions provide excellent material on secondary education in its broad scope—history, programs and curriculum, administration and organization, and student population. The 1960 edition is much more comprehensive than the later edition. However, excellent studies of the student population of the secondary schools is contained in a separate article "Student Characteristics: Elementary and Secondary" in the 1969 edition. Also, the article on "Sociology of Education" in the same edition is excellent material on some of the forces that have shaped the character of the high school in this country.
5. Hahn, Robert O., and David B. Bidna, *Secondary Education: Origins and Directions*. New York: Crowell-Collier and Macmillan, Inc., 1965. An excellent collection of source material on the founding and development of the high school.
6. Krug, Edward A., *The Shaping of the American High School*. New York: Harper & Row, Publishers, 1964. A definitive history of the American high school from about 1880 to 1920. This is the period in which the present structure and program of the school was established, and Krug presents in detail the events and the people which dominated this development.
7. Organisation for Economic Co-operation and Development, *Development of Secondary Education: Trends and Implications*. Paris: OECD Publications, 1969. A very significant publication on the directions in which secondary education in 22 of the principal nations of the western world has

- been developing. Drastic changes have been taking place in many of these nations, and rapid increases in enrollments and programs have given rise to many problems and issues, extensively explored in this volume.
8. Perkinson, Henry J., *The Imperfect Panacea: American Faith in Education, 1865-1965*. New York: Random House, Inc., 1968. The author considers the centrality of education in the development of America during its most important era of social, educational, economic, and political advancement. The expectation that the schools would solve social problems of the era are examined, and he concludes that the American people have made unwarranted demands on the school and have expected them to accomplish social changes that are unrealistic.
9. *World Survey of Education, Vol. III. Secondary Education*. United Nations Educational, Scientific, and Cultural Organization, Paris; published by the International Documents Service, Columbia University Press, 1961. Although this extensive and most definitive survey available of the systems of secondary schooling in the countries of the world was published a number of years ago, it is still an excellent source of information on the nature and character of programs of education for youth and young adults throughout the world. Much of the information is still valid and accurate although rather extensive reforms have occurred in some of the nations.

CHAPTER 2

The United States of the Future: The Social Setting for the High School of Tomorrow

In Chapter 1 we analyzed the system of secondary schools now existing in the United States and discussed factors that shape the nature and character of education. But if evidence supports the thesis that the kinds of schools which a society demands and establishes inexorably reflects the social, political, economic, and moral life of the people themselves, and that schools continuously adapt to significant changes in society, it is essential early in a book on secondary education to give a careful description and analysis of major social conditions that will prevail in the years ahead. The authors do not assume the roles of astrologers or seers, but we believe that the writings and researches of scholars in each of the disciplines that treat the science of man and the character of his group life provide bases for presenting what to us seem to be the nature and character of social conditions and changes that will be evident during the next several decades.

The process of adapting schools to basic social change is slow and agonizing; it is not to be presumed that schools change their essential structure, basic program, and organizational practices overnight. But gradually changes will be made in the character and nature of the program of education as social conditions are altered.

Several groups of scholars and many individuals have analyzed trends and developments in American life and have published thoughtful predictions of changes that very likely will occur in our society between now and the year 2000. We will cite many of these works throughout the chapter, but at the outset attention should be directed to the work of the Commission on the Year 2000, appointed by the American Academy of Arts and Sciences, and chaired by the eminent sociologist, Daniel Bell. In his

introduction to the report of the Commission, Bell identifies four primary sources of change in our society in the years ahead.

The first source of change, according to Bell, is technology. He states:

Technology opens up many possibilities of mastering nature and transforming resources, time, and space; it also, in many ways, imposes its own restraints and imperatives. In the next thirty-three years we are likely to see great changes growing out of the new biomedical engineering, the computer, and, possibly, weather modification.¹

Bell believes that the second source of change, ". . . one of the most powerful engines in American society, represents the diffusion of existing goods and privileges in society, whether they be tangible goods or social claims on the community. This, in effect, is the realization of the promise of equality which underlies the founding of this country. . . ."²

His third source of change is:

. . . structural developments in society. The centralization of the American political system in the last thirty years has marked an extraordinary transformation of American life. It is the result, in part, of our becoming a national society through the new transportation and the mass media. But it also grew out of the need for central instrumentalities first to mediate the conflicts between large functional groups and later to mobilize the society because of the demands of war. A different, more subtle structural change has been the transformation of the economy into a "postindustrial" society . . . more importantly, the sources of innovation are becoming lodged in the intellectual institutions, principally the universities and research organizations, rather than in the older, industrial corporations.³

The fourth source of change that Bell identifies, perhaps, he says, the most important of all ". . . is the relationship of the U.S. to the rest of the world. . . . The problem of *détente* in a nuclear age, the gap between rich and poor nations, the threatening role of 'color' as a divisive political force, the changing balance of forces—both technological and moral—are all questions that reach from the present into the distant future."⁴

But in looking ahead to the year 2000 Bell makes this significant observation: "The simple point is that a complex society is not changed by a flick of the wrist. Considered from the viewpoint of gadgetry, the

¹ Daniel Bell, "The Year 2000—The Trajectory of an Idea," in The Commission on the Year 2000, "Toward the Year 2000: Work in Progress," *Daedalus*, 96, No. 3, p. 642 (1967).

² Bell, p. 643.

³ Bell, pp. 643-644.

⁴ Bell, p. 644.

United States in the year 2000 will be more like the United States in the year 1967 than different."⁵

Herman Kahn and Anthony J. Wiener, of the Hudson Institute, a research organization, have also written extensively on the future. In the same report of the Commission on the Year 2000, they list 13 "basic, long-term multifold trends, and one hundred technical innovations likely in the next thirty-three years."⁶

In their own large published work, they elaborate on these trends and innovations and speculate on the future of America.⁷

Another fruitful source of carefully formulated and profound ideas about America of the future, particularly our urban areas, is the work of the American Institute of Planners. It sponsored a two-year study that looked in depth into the future and attempted to set some patterns for the development of the urban environment for "the next fifty years." The study resulted in the publication of three volumes that constitute excellent source material for a consideration of major social trends in this country.⁸

In a useful work for studying the future, Kurt Baier and Nicholas Rescher⁹ consider the "impact of technological change on American values." In one of the studies reported, Rescher lists "possible developments to 2000 A.D. with major implications for American values," and "some possibilities for future value change in America."¹⁰

But perhaps we should be sobered by Peter Drucker's scorn for soothsayers: "I envy the courage of the seers who tell us what 2000 may look like. But I have no desire to emulate them. . . . All we can ever predict is continuity that extends yesterday's trends into tomorrow."¹¹ He then lists four "discontinuities which, while still below the visible horizon, are already changing structure and meaning of economy, polity, and society." The major "discontinuities" are in four areas: "(1) Genuinely new technologies are upon us. . . . (2) We face major changes in the world's economy. . . . (3) The political matrix of social and economic life is changing fast. . . . (4) Knowledge, during the last few decades, has be-

⁵ Bell, p. 641.

⁶ Herman Kahn and Anthony J. Wiener, "The Next Thirty-three Years: A Framework for Speculation," *Daedalus*, pp. 705-732.

⁷ Herman Kahn and Anthony J. Wiener, *The Year 2000: A Framework for Speculation on the Next Thirty-three Years* (New York: The Macmillan Company, 1967).

⁸ William R. Ewald, Jr., ed., *Environment for Man: The Next Fifty Years* (1967); *Environment and Change: The Next Fifty Years* (1968); and *Environment and Policy: The Next Fifty Years* (1968) (Bloomington: Indiana Press University).

⁹ Kurt Baier and Nicholas Rescher, *Values and the Future* (New York: The Free Press, 1969).

¹⁰ Appendixes 3 and 4, pp. 96-101.

¹¹ Peter F. Drucker, *The Age of Discontinuity: Guidelines to Our Changing Society* (New York: Harper & Row, Publishers, 1968), p. xii.

come the central capital, the cost center, and the crucial resource of the economy."¹²

Call them trends, speculations, continuities, or discontinuities; scholars rather unanimously identify these as major forces and conditions of social life that will significantly shape the world in which we hold school in the decades ahead:

- The rapidly increasing population of the United States and the world
- Urbanization and metropolitanism
- A technological society
- Biomedics, genetic alteration, and genetic counseling
- Pollution and control of man's environment
- Moral pluralism and shifts in the American ethos
- Shifts in occupational patterns
- Big government

The Rapidly Increasing Population of the United States and the World

The increase in population in the United States and, in fact, throughout the world has been so enormous in the post-World War II period that it is referred to as a "population explosion." The dramatic nature of this increase in the United States is shown by the data in Table 2 and by the line graph in Figure 2. In just three decades since 1940, the population of the United States has increased somewhat more than 50 percent, an increase of more than 70 million people. The United States passed the 200 million mark in the late 1960s, and it is estimated that we will gain another 100 million people by the turn of the century, a total population of somewhat over 300 million people. The growth each decade in the latter part of this century and the first part of the twenty-first century will be more than 30 million people or a net increase of over 3 million people annually.

Birth rates per hundred thousand of population dropped rather markedly in the latter part of the 1960s, but inasmuch as there is an ever increasing number of women in our population attaining childbearing age, even a decline in birth rates still results in a considerable increase over the years in the number of births and consequently in the total population.

This tremendous increase in population obviously will wield a very significant influence on the lives of the American people—on schools, social institutions of all kinds, government, business and industry, the professions, and, in fact, on every aspect of individual, group, and national life as well as on international relationships.

¹² Drucker, pp. ix-xi.

Table 2. Actual, Estimated, and Projected Population of the United States, 1940-2015

Year	Population	
		Projected Population
	Series B ^a	Series C ^b
1940	131,669,275	
1945	140,468,000 ^a	
1950	151,325,798	
1955	165,931,000 ^a	
1960	179,323,175	
1965	194,592,000 ^a	
1970	206,472,000	
1975	223,785,000	219,366,000
1980	243,291,000	235,212,000
1985	264,607,000	252,871,000
1990	286,501,000	270,770,000
1995	309,830,000	288,763,000
2000	335,977,000	307,803,000
2005	365,254,000	328,679,000
2010	397,206,000	351,141,000
2015	431,495,000	374,800,000

^a Estimated by the Census Bureau, as of July 1.

^b The Census Bureau uses four estimated fertility rates in predicting population. Series B and C are the middle two of the set. Series B is considered a moderately high rate in that it presumes only a modest drop from the levels of fertility in the 1950 decade; Series C is based on the assumption that fertility will drop to a level commensurate with the prevailing rate prior to the postwar rise.

Sources: U.S. Bureau of the Census, *Statistical Abstract of the United States*: 1969, 90th ed. (Washington, D.C.: Government Printing Office, 1969), p. 5; "Population Estimates," *Current Population Reports*, Series P-25, No. 381 (1967), and 418 (1969). (Washington, D.C.: Government Printing Office); press release, November 1970.

The character and nature of population growth throughout the world is also of great importance for the people of the United States. And the situation is indeed threatening.

Table 3 presents the most widely accepted projections of the population of the world available at the present time. The United Nations has spent a great deal of time and effort in studying the entire situation and the projected world population is the result of their studies. The data show that the population of the world was estimated to be nearly 3 billion in 1960, and it is predicted that this number will double by the year 2000, with more than 6 billion people inhabiting the world.

Moreover, one of the most important conclusions of these studies

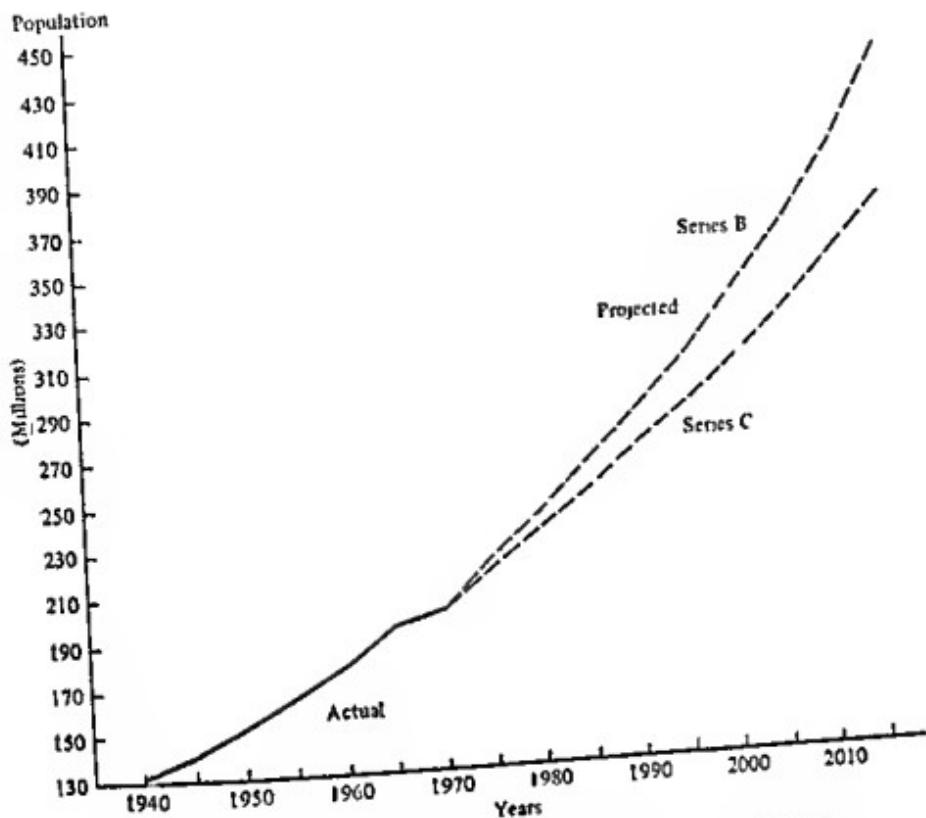


Figure 2. Actual and projected population of the United States, 1940-2015.

is that population growth during the remainder of this century will be much higher in what are officially designated as the "developing regions" of the world. The predictions show that the population in these countries will considerably more than double during this 40-year period, increasing from about 2 billion to almost 4.7 billion by the year 2000. In the meantime, in the more developed countries of the world, the increase will be somewhat less than half a billion people, an increase from somewhat under 1 billion to a 1.4 billion.

These data are based on a medium rate of fertility. If, on the one hand, the peoples of the world should produce children at a rate indicated by the high variant, the population would be almost 7 billion by the year 2000; on the other hand, if fertility rates should drop to the low variant used by the United Nations demographers, the world population by the year 2000 would be somewhat under 5.5 billion.

The impact of the population explosion on education, not only in the United States but throughout the world, is obvious in many aspects

Table 3. Population of the World, 1960, and Projected to 2000 by Broad Age Groups and Development Regions (Medium Variant)

Age Group and Area	Numbers of Population (in millions)*				Index of Change (1960 = 100)		
	1960	1970	1980	2000	1970	1980	2000
<i>All age groups</i>							
World Total	2998	3592	4330	6129	119.8	144.4	204.4
More developed regions ^b	976	1082	1194	1441	110.8	122.3	147.6
Developing regions ^b	2022	2510	3136	4688	124.1	155.1	231.9
<i>0-14 years</i>							
World Total	1091	1309	1553	1993	120.0	142.4	182.7
More developed regions	280	291	307	373	103.8	109.7	133.0
Developing regions	810	1018	1245	1620	125.7	153.6	199.9
<i>15-64 years</i>							
World Total	1758	2093	2535	3759	119.0	144.2	213.8
More developed regions	615	692	767	916	112.4	124.6	148.9
Developing regions	1143	1401	1769	2843	122.6	154.8	248.8
<i>65 years and over</i>							
World Total	148	195	252	391	131.3	169.7	263.4
More developed regions	81	104	130	166	129.2	160.5	205.7
Developing regions	68	90	122	224	133.8	180.8	332.4

* Because of rounding, do not add to exact total.

^b More developed regions include Japan, Europe, USSR, Northern America, temperate South America, Australia, and New Zealand; developing regions include Africa, East Asia (excluding Japan), South Asia, Latin America (excluding temperate South America), Melanesia, Polynesia, and Micronesia.

^c Figures for population by broad age groups do not include populations of Polynesia and Micronesia. They also do not allow for an adjustment subsequently made in the total population.

Source: United Nations, *World Population Prospects, as Assessed in 1963* (United Nations St/Soa/ Publication, Sales No. 66.XIII.2), part II as presented in Zdenek Vavra, "Future Trends in World Population Growth," *Demography*, 4:497-514 (1967).

but, perhaps, more hidden in other aspects. Among the major implications for education are the following:

1. The tremendously increasing demands for education in the United States and throughout the world will necessitate huge expansion of school facilities, large increases in tax moneys for the support of public education, tremendous demand for more teachers, school administrators, college pro-

fessors, and all other people in occupations directly related to education, gross increases in the manufacture and production of school equipment, technological machines, and devices for facilitating teaching.

2. Not only will the sheer numbers to be educated increase in the United States and the other nations of the world, but the demand for more education by the people undoubtedly will increase. The competition for jobs, positions of leadership and responsibility, and opportunities to enter the upper level of the occupational stratum will increase sharply as the population grows. Although these kinds of jobs will also expand and perhaps at a higher rate than the total population, the competition among young people for the opportunity to enter these more prestigious types of occupations will become more intense regardless of demand.

3. More serious, all nations experiencing a population explosion will be hard pressed to provide full employment for those in the working-age bracket. The substantial increase in this segment of the population means that the economy of such a country must expand each year if the relatively large number of young people who wish to enter the labor force are to find employment.

4. The large number of young people who will seek to enter the labor force in the decades ahead necessitates that educational institutions of all types, including secondary schools, postsecondary schools of various kinds and colleges and universities, examine fully their responsibilities and roles in vocational education and in the preparation of the young for a career.

5. Secondary school educators should give consideration to their responsibilities in educating students about the world population situation and its implications for the future development, not only of our country, but of the world. Unquestionably the school curriculum should include an appropriate study of population problems, including such matters as planned parenthood, birth control, and related issues.¹³

6. Many demographers and other students of population problems fear that a number of nations of the world face famine.¹⁴ World famine, which fortunately has become somewhat less threatening during the last several years because of the development of new varieties of grains and foodstuff and other scientific efforts to increase food production throughout the world, would, of course, increase demands that the United States share its bountiful supply with the starving peoples of the world. This in turn increases the competition for public funds, about which we have already written.

7. The growth in population will result in many dramatic changes in the social life of the American people. The trend to urbanization and metropolitanism, discussed in the next section, will increase significantly. Modes of

¹³ See particularly, Randall C. Anderson, "Introducing the World Population Crises to Secondary Social Studies Classes: An Inquiry-oriented Instructional Strategy," *Social Education*, 34:27-35 (January 1970).

¹⁴ President's Science Advisory Committee, *The World Food Problem*, Report of the Panel on the World Food Supply, three vols. (Washington, D.C.: Government Printing Office, 1967).

living, transportation, communication, distribution of food and supplies, and the manner in which food will be prepared for use by the family will be altered dramatically. Pollution of the air, water, and soil will increase greatly unless drastic measures are taken to control it. Recreational facilities will be taxed to capacity, and many people will not be served adequately unless whole new approaches to this aspect of good living are taken. Highways, streets, airports, and all transportation facilities will be jammed with people, and, undoubtedly, new methods of providing travel facilities will need to be made. Open space will be reduced drastically, and an "anthill" mode of living will be an accepted fact. Some of these matters will be considered further in this chapter. The constant question before us is—how should we educate youth for life in this kind of world?

Urbanization and Metropolitism

Because of the rapid growth in population in the United States, the rapid advancement of technology and industrialization, the stupendous mechanization of agriculture and the increase in agricultural production per man hour of labor, and a number of environmental and social factors, the American people have tended to migrate to and to congregate in urban centers. If we use the U.S. Census Bureau's definition of urban, the percent of the population that lived in urban areas in the United States is shown in Table 4.

More than 70 percent of the population of the United States now lives in urban places. This means that more than 140 million of the approximately 206 million people living in this nation in 1970 lived in cities of 2500 or more and in densely populated areas of the United States. It is estimated that during the 30-year period from 1970 to 2000, as was shown in Table 2, the population of the United States will increase at least 100 million people; demographers predict that the cities and metropolitan areas of this country will gain 80 million of this increase, making this nation much more urban than it is today.

But the great expansion of the metropolitan areas will be in the suburban and fringe sections rather than in the central part of these great population complexes. The Census Bureau in 1960 identified 212 Standard Metropolitan Statistical Areas. The criterion for designating such areas is considerably more restricted than the definition for urban areas, inasmuch as it is an effort to identify the large metropolitan concentrations of population. Gist and Fava, using this definition and census data, show the disparity in growth between the central city and the suburban areas. Table 5 shows the much more rapid growth of large urban areas than of the remainder of the country. In the five largest SMSA's, only Los Angeles experienced an increase in the central city during the decade of 1950-1960.

Table 4. Population Living in Urban* Places, United States, 1790-1960

Census Year	Percent	Census Year	Percent
1790	5.1	1890	35.1
1800	6.1	1900	39.7
1810	7.3	1910	45.7
1820	7.2	1920	51.2
1830	8.8	1930	56.2
1840	10.8	1940	56.5
1850	15.3	1950 (old def.)	59.0
1860	19.8	1950 (new def.)	64.0
1870	25.7	1960 (old def.)	63.0
1880	28.2	1960 (new def.)	69.9

* Prior to 1960, urban was a town of 2500 residents or more; in 1960, the Census Bureau defined urban as places of 2500 inhabitants or more either incorporated as cities, villages, or towns, or as unincorporated places; in densely settled urban fringe areas, whether incorporated or not, around cities of 50,000 population or more, or in certain towns and townships in New England, New Jersey, and Pennsylvania in which there is no incorporated municipality but in which the population totals 25,000 inhabitants or reaches the density of 1500 persons per square mile. The data for 1950 and 1960 are presented on the basis of both definitions.

Source: Noel P. Gist and Sylvia Fleis Fava, *Urban Society*, 5th ed. (New York: Thomas Y. Crowell Company, 1964), p. 50.

(Table 6). In September 1970 the Census Bureau announced that "for the first time in history, suburbanites outnumber those living in central cities — 76 million to 61 million." The continuation of the urbanization of the United States is further illustrated in Table 7.

Table 5. Percent Increase in Population during the 1940-1950 and 1950-1960 Decades, According to Type of Area

Type of Area	1950 to 1960	1940 to 1950
Total U.S. Population	18.5	14.5
All Metropolitan Areas	26.4	22.0
Central cities	1.5*	13.9
Suburban areas	61.7*	35.6
Area Outside of Metropolitan Areas	7.1	6.1

* Corrected to rule out any population change due to annexation of territory.

Source: Noel P. Gist and Sylvia Fleis Fava, *Urban Society*, 5th ed. (New York: Thomas Y. Crowell Company, 1964), p. 73.

Table 6. Percent Change in Population in the Central City and the Territory outside the Central City in the Five Largest Standard Metropolitan Statistical Areas, 1950-1960

Metropolitan Area	Percent Change, 1950 to 1960	
	In Central City	Outside Central City
New York	-1.4	75.0
Chicago	-1.9	71.5
Los Angeles	27.1	82.6
Philadelphia	-3.3	46.3
Detroit	-9.7	79.3

Source: Noel P. Gist and Sylvia Fleis Fava, *Urban Society*, 5th ed. (New York: Thomas Y. Crowell Company, 1964), p. 74.

Megalopolis

The tremendous concentration of population in large metropolitan areas has given rise to the development of a new type of metropolitan

Table 7. Projected Growth in the Population of Metropolitan Areas and in the Ten Largest Areas between 1965 and 1975

Metropolitan Area	Population*		Percent of Change 1965 to 1975
	1965	1975	
All Metropolitan Areas	121,458,000	136,466,000	12.4
10 largest areas	47,855,000	53,168,000	11.1
New York, New York	11,366,000	12,078,000	6.3
Los Angeles-Long Beach, Calif.	7,877,000	9,893,000	25.6
Chicago, Ill.	6,688,000	7,288,000	9.0
Philadelphia, Pa.	4,659,000	5,080,000	9.0
Detroit, Mich.	3,978,000	4,174,000	4.7
Boston, Mass.	3,205,000	3,334,000	4.0
San Francisco, Calif.	3,081,000	3,625,000	17.7
Washington, D.C.	2,409,000	3,034,000	25.9
Pittsburgh, Pa.	2,385,000	2,306,000	-3.3
St. Louis, Mo.	2,198,000	2,356,000	7.2

* Estimated for 1965, projected for 1975; projections based on Series 1-d of population forecasts.

Source: U.S. Bureau of the Census, *Projections of the Population of Metropolitan Areas: 1975, Current Population Reports, Series P-25, No. 415* (January 31, 1969), Table G.

area in which the ever-expanding suburban areas fill in the space between each other so that a large land mass actually becomes a densely settled and continuous area of built-up businesses, factories, apartment houses, and dwellings.

Jean Gottmann, a French geographer, applied the term "megalopolis" to such a population phenomenon. The names "strip city" and "super-metropolis" have also been applied to this type of urban area. The megalopolis that Gottmann identified extended from southern New Hampshire, encompassing much of Massachusetts, Connecticut, Rhode Island, and the southern part of New York State, all of New Jersey and Delaware, the District of Columbia, parts of Pennsylvania, most of Maryland, and part of Virginia to Newport News. Even in 1960, this area comprised over 53,000 square miles and had a population of more than 37 million, about one-fifth of all of the population of the U.S. In the Census Bureau's identification of all of the metropolitan areas, 34 of its 212 Standard Metropolitan Statistical Areas are encompassed within Gottman's megalopolis.

By 1970, students of urban affairs felt that the area in southern California and the region from Milwaukee through Chicago around the Great Lakes to Detroit properly constituted two other megalopolises. And many foresee that by the turn of the century there may well be as many as 30 or more of these strip city areas, if not actually megalopolises in the true sense of Gottman's definition.

Urbanization and the Schools

Obviously, urbanization has had its impact on the educational system of this country. Table 8 shows that almost two-thirds of all of the pupils in public schools in 1967 were enrolled in schools located in large metropolitan areas. Distributing 28.5 million pupils among 227 SMSA's means, similarly, large concentrations of schools within small geographic areas. In fact, all of the remaining 15½ million pupils were spread out across the rest of the nation, with 17,861 districts responsible for their education.

But no one school district encompasses an entire SMSA, so that authority for schooling even in these urban centers is divided among 5,529 separate districts. For example, the New York metropolitan area encompassed 198 separate public school systems in 1967. These districts enrolled 1,875,712 pupils. However, New York City itself comprised only one public school system, and it alone enrolled 1,084,845 pupils. Included in the Chicago SMSA in 1967 were 327 public school districts, enrolling a total of 1,286,717 pupils. Dade County, Florida, which includes Miami, Miami Beach, and Coral Gables, comprises simply one single school district organized on a county unit basis, yet in 1967 it enrolled 209,236 pupils. The metropolitan area comprising Los Angeles county had 96

Table 8. Number of Public School Systems within and outside of the 227 Standard Metropolitan Statistical Area (SMSA) and the Enrollment by Size of School System, 1967

Size of School System (Pupils Enrolled)	Number of School Systems		Total Number of Pupils Enrolled	
	Within SMSA	Outside SMSA	Within SMSA	Outside SMSA
1,200 or more	3,112	3,468	27,503,448	11,943,389
300-1,999	1,218	4,344	855,258	2,768,126
150-299	333	1,758	72,462	385,970
50-149	358	1,872	34,538	174,765
1-49	258	4,801	6,512	86,797
Nonoperating	250	1,618		
Total	5,529	17,861	28,472,218	15,360,047
Percent	23.6%	76.4%	65.0%	35.0%

Source: U.S. Bureau of the Census, *Census of Government, 1967: Vol. I, Governmental Organization* (Washington, D.C., 1968), Table 17.

public school districts, with 1,427,637 pupils. The Detroit metropolitan area comprised 97 school districts, which enrolled 931,234 pupils.¹⁵

On the other hand, the opposite effects of urbanization are seen in the large number of school districts in the United States that enroll very few pupils. Table 8 shows that 8431 of the 17,861 school districts outside of metropolitan areas enrolled less than 300 pupils in the entire school system. Many of these are elementary schools, often the historic one-room school located in rural areas.

At the present time, the intensive movement to urbanization and metropolitanism in this country has resulted in three serious school problems that cry for solution as we move into the last part of the century: (a) the overwhelming problems of administering large city school systems, such as those cited in the previous section; (b) the disparity, often extreme in nature, that exists between the central city school district and the suburban school districts in expenditures per pupil, tax resources per pupil, buildings and facilities, pupil-teacher ratios, instructional resources, community interest in and support of the school, program, and, in fact, most factors that educators deem to be significantly related to the quality of the educational program; and (c) the relationship of the school district that comprises the central core of the metropolitan area to the districts in the surrounding suburban areas of the SMSA's.

Many proposals and a number of plans have been advocated and

¹⁵ U.S. Bureau of the Census, *Census of Governments, 1967: Volume I, Governmental Organization* (Washington, D.C.: Government Printing Office, 1968), Table 19.

some actually tried for administering the large urban city school. The principal technique has been to subdivide the school district into sub-district or regional areas and to appoint an assistant superintendent of schools to administer the schools within the subdistrict. But in New York City another approach was adopted in 1969. After several years of study, including reports by consultative committees, the legislature passed a law that ordered the school district decentralized.¹⁶ The existing school district will continue as a legal entity with a board of education and an appointive chancellor as its chief administrative officer. But much of the authority and responsibility for the operation of the schools, particularly in educational and program matters, are vested in 31 decentralized, largely autonomous, community school districts. Each of these school districts has a minimum of 20,000 pupils. The citizens of each district elect a board of education, which has the same powers and authority as most local boards of education throughout the United States, except for general control by the city-wide board over fiscal matters, new construction, and the employment, determination of salaries, and working conditions of teachers. Five members of this board, one from each borough, are elected by the citizens and two are appointed by the mayor. Educators and citizens throughout the nation are studying closely these developments in our largest school system to consider their significance for other systems.¹⁷ Reports of recent major studies and evaluations of the Washington, D.C., and Chicago school systems have made recommendations for the establishment of subdistricts within these school systems and for authority to be granted local boards of each subdistrict.¹⁸

Variations in the quality of schooling generally available in the schools of the central core district and the surrounding urban and suburban school districts is evident to anyone familiar with metropolitan areas. The variations are often equally as sharp among the schools of the central school district themselves, particularly between schools serving areas in which residents have high incomes and schools in the slum and ghetto

¹⁶ "City School Bill Voted in Albany; Governor Signs It," *The New York Times*, 118, No. 40,640, pp. 1 and 39 (May 1, 1969).

¹⁷ Among many articles written on the subject of decentralization these two references are especially significant: Richard L. Featherstone and Frederick W. Hill, "Urban School Decentralization," 5 parts, *American School and University*, 41:44-48 (October 1968); 56-59 (December 1968); 30-32 (February 1969); 46-48 (April 1969); and 42:62-66 (September 1969); and David Selden, "School Decentralization: A Positive Approach"; and Mario D. Fantini, "Participation, Decentralization, Community Control and Quality Education," *The Record—Teachers College*, 71:85-107 (September 1969).

¹⁸ A. Harry Passow, study director, *Toward Creating a Model Urban School System: A Study of the Washington, D. C. Public Schools* (New York: Teachers College, Columbia University, 1967), pp. 9-12, 153-170; Robert J. Havighurst, *The Public Schools of Chicago: A Survey for the Board of Education, City of Chicago* (Chicago: The Board of Education, 1964), pp. 397-401; 146.

Major modifications and advancements in American society due to scientific and technological developments and the areas of social life in which great changes undoubtedly will continue to be made in the future may be summarized as follows:

1. *Energy resources:* We now are at the place in our national development where we have available practically unlimited energy. This originally consisted of the capital resources of energy, such as coal, oil, and natural gas, which are the stored energy sources available in natural condition, and the income resources, such as hydro power, nuclear power, and atomic energy. Energy sources still largely undeveloped in this nation are those represented by oil shales and tar sands, tidal power, wind power, solar energy, and geothermal energy. Unquestionably one of the major advancements in the future will be the increased use of nuclear and atomic energy.

2. *Transportation:* Supersonic jets and the air bus are already realities, and the future promises even greater developments in airborne and rocket transportation and, perhaps, forms of magnetic or nuclear-powered travel.

3. *Space:* Man's conquest of space already exists. Developments in the future will undoubtedly include prolonged exploration and travel to many parts of the universe, satellite platforms and space centers, thorough exploration of the moon and possibly other nearby planets.

4. *Communication:* The communication "explosion" is already well known even to young children, who accept television even when the telecast is transmitted by satellites or from outer space. Facsimile transmission, simultaneous voice and visual communication as convenient as the present telephone, all sorts of information retrieval systems available to individuals, even in the home if desired, are no longer visionary at this stage of our advancement in communication and informational storage and retrieval techniques.

5. *Computerization and Cybernation:* The development of the computer has been very rapid during the past decade, and the computerization of many processes of record keeping, storage and retrieval of knowledge, and even decision-making and logical thinking are evident. Major changes in many processes such as business transactions, banking, and the use of computers in decision making and logical thinking is developing and will become a major factor in many aspects of management and executive control. It is not that the computer will replace man as a decision-maker, but rather that man will rely on the computer for basic data and for possible solutions to problems that will give a much better choice of alternatives and a much better control over the process of decision-making. Simulation will also be a major aspect of computerization of decision-making. In cybernation, the computer itself controls other machines engaged in production so as to make relatively automatic many processes of manufacturing and production of goods.

been extensive and sophisticated. The application of the gasoline motor to agricultural implements, and somewhat later, the use of electrical power in agriculture, and particularly in the modernization of the farm home, have not only eased the manual labor of the farmer but have made life more comfortable and pleasant. Some modest control of weather conditions through cloud seeding to produce rain or to dispel fogs is possible. Another great area of advance has been in the genetic control of plant and animal production such as the development of hybrid varieties of grains and vegetables and livestock breeding and adaptation of breeds to different environmental conditions and food preferences of the American people.

Developments in irrigation and the controlled application of water to the land have also contributed markedly to the advancement in food production. Control of diseases and pests through chemical means has become widespread. Probably the greatest single factor resulting in great increases in food productivity has been the use of fertilizers in plant, grass, and lumber production and the use of antibiotics and chemical food supplements in the rations of farm animals. Food processing and packaging have also undergone major changes, such as have occurred in dehydrated and frozen food developments and, looming in the future, the preservation of food by radiation. Other developments include a greater use of technology in obtaining and preserving all sorts of sea foods and in mariculture (sea farming).

A closely related development is in forestry. Here not only do developments relate to methods of cutting and preparing trees for the lumber market but also to tree farming and various other aspects of conservation that will increase the availability of woodlands, native grasses, native terrains, and the like.

8. *Warfare:* The application of scientific knowledge and technology in World War II witnessed the first instance of use of nuclear energy as a source for destruction. The use of the airplane and mechanized equipment powered by petroleum fuels has been very marked and developments in weaponry, explosives, and gunpowder have been similarly extensive. The awesome future in technological warfare includes the possibility of space warships, thermonuclear bombs, antimissile defense systems, the use of lasers and nuclear-powered vehicles of war, and sea and underwater combat.²³

The only hope for mankind throughout the world is that such developments in modes of warfare are so awesome and so threatening to our very existence that nations will mutually agree to disarmament, to a cessation of the application of technical knowledge to weaponry, and to peaceful settlement of all differences and national conflicts of interest.

9. *Systems planning:* The systems approach to planning represents a way of utilizing technological resources in production, planning, and management. It can properly be designated as a technological development, since it represents a method of utilizing the technological resources at our disposal in solving our social and human problems, as well as directing manufacturing and

²³ Herman Kahn and Anthony J. Wiener, "Technological Innovation and the Future of Strategic Warfare," *Astronautics and Aeronautics*, 5, No. 12, pp. 28-48 (December 1967).

production processes. It is a process of rational thinking and planning that identifies the pertinent resources and conditions that could contribute to the solution of problems or the achievement of a goal and then arranges them in systematic order so that all of the resources are properly integrated and coordinated in achieving the ends sought. This mode of planning and achieving major social advances will be used increasingly in the years ahead. Schools themselves are using the technique to provide better programs of education.

10. *Oceanography*: Oceanography is in its primitive stages. In fact, Peter F. Drucker insists that ". . . on the oceans man is still a hunter and a nomad, rather than a cultivator. He is in the same early stage of development as our ancestors almost ten thousand years ago when they first tilled the soil." But he insists that "comparatively minor efforts to gain knowledge of the oceans and to develop technology to cultivate them should therefore yield returns—not only in knowledge, but in food, energy, and raw materials also—far greater than anything we could get from exploiting the already well-explored lands of the continent. Oceanic development, rather than space exploration, might well turn out to be the real 'frontier' in the next century."²⁴

Developments in oceanography will take place in aquaculture, the farming of plants and animals of the sea, the extraction of minerals from the sea floor and the land mass under the oceans, the use of seawater as a source of fresh water, development of power from tides and other marine action, and possibly several other developments. The sciences of physical oceanography, marine geology, chemical oceanography, marine biology, and marine archeology, underwater transportation and living in underwater cities will be new aspects of the broad areas of study of the ocean scientists.

11. *Weather forecasting and modification*: This aspect of technology is also in its rather early stages, but significant developments and possibilities lie ahead. TIROS (Television Infra-Red Observation Satellites) have now been used for a decade to gather a variety of essential weather data. In addition, extensive use is made of automatic observing stations, upper-air sounding stations for weather balloons, and various gadgets and instruments for gathering comprehensive sets of weather data. Such information can now be analyzed by computer methods which almost instantaneously provide a great deal of information about global atmospheric and weather conditions. Scientists are busily developing and seeking to verify major weather prediction models which, when thoroughly validated, will tremendously expand the range and accuracy of weather forecasting. A second major area of technological development will be in weather making. Developments here are scanty at the present time and our knowledge is very sketchy, but there are indications that man will, in time, be able at least to modify weather under limited conditions in particular locations.²⁵

²⁴ Peter F. Drucker, "Technological Trends in the Twentieth Century," *Technology in Western Civilization*, Vol. 2, *Technology in the Twentieth Century*, Melvin Kranzberg and Carroll W. Pursell, Jr., eds. (New York: Oxford University Press, 1967), p. 21.

²⁵ Also, see John Lear, "The Making of Weather," *Saturday Review*, August 1, 1964, pp. 35-38; and Thomas F. Malone, "Tinkering with Our Atmospheric Environment," *Technology Review*, 70, No. 7, pp. 41-47 (May 1968); and see especially, J. O. Fleisch-

12. *Health care and medical technology:* The application of technology to health care and medicine has in many respects been almost as phenomenal as it has been in other fields more familiar to the layman. And here, we are not referring to advancements in medical science, medical treatment and disease control, pharmaceutics, and the like but rather to the use of technological devices for treating patients. Illustrations are the pacemaker device which electronically controls and regulates heartbeat, physiological monitoring of a patient's total physical state, often with the monitoring instruments linked to a computer, and the use of tiny sensors, the electroencephalograph, and computers as medical diagnostic tools. But the most startling advance in medical technology and health care has been the transplantation of whole organs and the substitution of mechanical devices for certain biological organs in man.²⁶

13. *Educational technology:* Teaching and instruction is also benefiting from the application of technology, although not in as startling and revolutionary manner as in the other areas discussed in this section. Most educators foresee significant and extensive advances in the use of technology and the broadening of the types of instruments and devices available for teaching and instruction in the years ahead. The use of computers for actually carrying on instruction in schools is already well under way, and their use as information-storing devices, which may then be used as instructional resources in addition to or in lieu of books and other types of published material and films, is already seen in schools and colleges.

Television, both broadcast and closed-circuit types, is extensively used; video tape recorders and playback machines may be used in a variety of ways. It is now readily feasible for school children, through transmission by communication satellites, to view events and hear performances, addresses, or anything of interest that can be filmed by the television camera in any part of the world.

A Commission on Instructional Technology appointed by President Lyndon Johnson in 1968 concluded in its official report submitted in 1969:

On the basis of present experience and informed projections, the Commission believes that technology could bring about far more productive use of the teacher's and student's time. Of particular importance is its capacity to provide instruction that is truly tailored to each individual student. . . . Moreover, technology could help educators base instruction more systematically on what is known about learning and communication. . . .²⁷

net, "Controlling the Planet's Climate," *Impact of Science on Society*, 19, No. 2, pp. 151-168.

²⁶ A rather thorough analysis of the application of technology to health care and medical science is James F. Dickson, III, M.D., "The Life Sciences, Technology, and Unmet Human and Community Needs," *Applying Technology to Unmet Needs*, Appendix Vol. V, *Technology and the American Economy*, The Report of the National Commission on Technology, Automation, and Economic Progress (Washington, D.C.: Government Printing Office, 1966), pp. 187-202.

²⁷ Commission on Instructional Technology, *To Improve Learning*. A report to the

To expand and improve the use of technology in teaching the Commission recommended that Congress create National Institutes of Education, one of which would be a National Institute of Instructional Technology.

Although the technological developments possible during the remainder of the twentieth century are awesome, the most serious problem is not whether man can advance technology but whether he can live happily and lead a satisfying life not only for himself but in relation to his fellowmen throughout the world in light of these technological and scientific developments. Social questions and our ability to adapt to new modes and conditions of living face the people of this nation in the decades ahead. Melvin Kranzberg and Carroll W. Pursell, Jr., well state the situation:

However one judges the problem, technology lies at the center of the 20th century and its dilemmas. In three major areas it defines the boundaries of the possible and offers both the rewards for success and ghastly penalty for failure: the overriding concern for peace, the rising demand from exploited peoples all over the world (and here at home) for justice, and the need to close the gap between the material abundance supplied by technology and the want which still besets the lives of most of the world's people. Without social justice there can be no peace; without the development of technology which creates abundance there is not likely to be social justice; and without peace we are unlikely to concentrate on the technologies appropriate for peace.²⁸

David Sarnoff also issues a challenge to man:

The real promise of technology is that it will release man from routine drudgeries of mind and body and will remove the final imprint of the cave . . . man's mind will then be free for the creative thinking that must be done if the imprint of science is to be harmonized with man's enduring, spiritual, social, and political needs.²⁹

The most important cluster of problems, then, facing man in the technological world of the future remains social and cultural. Obviously this in turn means that the schools and educational institutions of the future will carry a major responsibility for helping man utilize his technological and scientific knowledge for the enhancement of his own spirit, his own joys of living, and his own cordial and cooperative relationships with his fellowmen.

President and the Congress of the United States (Washington, D.C.: Government Printing Office, 1970), pp. 6-7.

²⁸ Melvin Kranzberg and Carroll W. Pursell, Jr., "Technology's Challenge," *Technology in Western Civilization, Volume 2, Technology in the Twentieth Century*, Melvin Kranzberg and Carroll W. Pursell, Jr. eds. (New York: Oxford University Press, 1967), p. 707.

²⁹ Sarnoff, press release.

Biomedics, Genetic Alteration, and Genetic Counseling

Although the scientific and technological developments and possibilities for the future, discussed in the previous section, are indeed impressive and tremendously significant to man, many scholars believe that the greatest scientific advances holding the greatest portent for the future of man have been in the field of the biological sciences. These advances include the development of the genetic code (DNA)—and with this knowledge the potentialities of alteration and modifications of the genetic structure—the isolation and identification of a single gene in the DNA structure, thus tremendously advancing the possibilities of alterations of a specific nature, the much more complete knowledge of the nature and character of heredity and of genetic influence on human development, some awesome possibilities for control of the nature and character of man himself, and, finally, the possibilities that man may artificially create living matter. Aldous Huxley, who published his astounding book *Brave New World* in 1932, remarked in 1946 that ". . . the really revolutionary revolution is to be achieved, not in the external world but in the souls and flesh of human beings." In 1969, Bentley Glass, an eminent geneticist, was more specific on the potentialities Huxley foresaw:

Together with developments in the culture of reproductive cells and embryos, with investigation and control of the mutation of genes and chromosomes by application of X-rays or selected chemical agents, with studies of the sex life of bacteria and the replication of viruses inside of host cells, and especially with our growing insight regarding the nature of all hereditary substance and its mode of action, the evolutionary theory of today places in human hands the possibility of henceforth modifying all life, including the nature of our own species.³⁰

An excellent account of the nature and character of the "biological revolution" is provided by Donald Fleming and a number of scholars who commented on his analysis of twelve discoveries in biology and genetics in recent years.³¹

The basis for much of the advance in biology was the determination of the genetic code. Much work had been done by scientists on the carriers of hereditary traits, but it was not until 1953 that James Watson and Francis Crick in a joint collaboration at Cambridge University established the structure of DNA.³²

³⁰ Bentley Glass, "Evolution in Human Hands," *Phi Delta Kappan*, 50,506 (May 1969).

³¹ Donald Fleming, "On Living in a Biological Revolution," *Atlantic Monthly*, Vol. 223, No. 2, pp. 64-70 (February 1969); and "Further Thoughts on the Biological Revolution," No. 3, pp. 46-50 (March 1969).

³² Although there are many accounts of the work of Watson and Crick, who were later awarded a Nobel prize for discovering the code, one of the most interesting reports is to be found in a series of lectures by another Nobel prize-winning geneticist.

The complexity of the hereditary process and the tremendous numbers of combinations that are possible in the transmission of hereditary traits is pointed out by Dr. Beadle:

In the nucleus of the egg cell from which we started development there are five billion of these "letters" (the hereditary messages contained in the DNA molecules). . . . In such a code we could take the five billion DNA "letters" of the nucleus of the egg, translate them into letters of the alphabet and then spell out a message. . . . If we write out messages in all of these letters in words which average five letters we will get 600,000 printed pages, or a thousand volumes averaging 600 pages each. . . . That is a set of genetic specifications for making one of us out of an egg cell, given a proper environment, proper raw materials, and so on.³³

With each parent contributing genes to the original cell from which life starts, the possibilities for disaster of some kind are evident. And that is exactly what happens in the hereditarily based characteristics of man today. The Beadles state the situation: "All told, approximately 5 percent of babies—that is one in every twenty—are born with a potential genetic defect of some sort, minor to gross in effect. The total number of people so affected may now number as high as 150,000,000 worldwide."³⁴

Scientists report that they already have identified at least several hundred of the genetic diseases that are transmitted through the genes from one generation to the next. Sometimes, depending on the DNA structure of the two parents, the disease may show up in their children, but often the defective genetic structure remains hidden and submerged in succeeding generations to appear later in the form of a defect or a disease hereditarily caused.

This fact suggests the possibility of alteration of the genes so as to avoid the transmission of these defective traits to later generations. This is not only a tremendously complex biological and medical problem, but also a major social issue. It is quite conceivable that the two aspects of treatment are frequently in conflict. The resistance of parents to any type of genetic alteration or treatment, the social stigma and implications of the discovery of such genetic defects, the threat of legal action that would prevent conception and hence natural reproduction, and many similar problems are almost incomprehensible.

If these genetic defects continue to multiply in accordance with Mendel's laws, will there come a time when society, overburdened in its

George Beadle; George and Muriel Beadle, *The Language of Life* (Garden City, New York: Doubleday & Company, Inc., 1966), Chap. 18.

³³ George W. Beadle, "The New Biology and the Nature of Man," *Bulletin of the Atomic Scientist*, 20:14 (March 1964).

³⁴ George and Muriel Beadle, p. 221.

opinion by the consequences of genetic diseases, will require that people who carry such defects be prevented from bearing offspring? Do individuals have an inalienable right to bear children without concern for the possibilities that such children will be born with serious defects that not only make their own lives unbearable, or at least unsatisfying, but also constitute a tremendous cumulative burden on the social group?

This of course brings us to the second aspect of this complex problem of alteration of the genes (or what some call "human engineering"). This is the question of whether man should deliberately set about to alter the gene structure in such a way as to create a particular kind of a human being. We have already cited Bentley Glass's visionary statement that man is now in almost full possession of the means to modify the hereditary nature of every plant, animal, and microbe that he wishes. Joshua Lederberg, Chairman of the Department of Genetics at Stanford University School of Medicine and a Nobel laureate, is even more positive about the power that man possesses through his knowledge of the genetic code: "The application of science to biology has reached near the fundamental secrets of life, and whether it be 20 years or 200, we are still very close to the ultimate scientific revolution: the precise control of human development."²³

But this optimistic view that man has the power to alter his genetic makeup, and, hence, to determine the kind of individuals that should inherit the earth in the future, is not supported as enthusiastically by other scholars. Robert D. DeMars states: "The successful application, to human cells, of the kinds of techniques that genetically alter microbes is likely to mean alteration of those cells, perhaps a gene at a time and with regard to traits that are simply defined and expressed. This is far from being the total aim of an effort to improve man's hereditary makeup."²⁴

The fantastic claims that parents of the future will be able to go to a genetic control center and prescribe the kind of baby they want to bear with regard to sex, level of intelligence, or other characteristics²⁵ are totally unrealistic. The best that geneticists can do in the foreseeable future is a small amount of human engineering in which steps will be taken to overcome the highly detrimental effects of certain types of defec-

²³ Joshua Lederberg, "Testimony," *Research in the Service of Man*, Hearings before the Committee on Government Operations, Subcommittee on Government Research, U.S. Senate, 90th Congress, First Session (Washington, D.C.: Government Printing Office, 1967), p. 17.

²⁴ Robert D. DeMars, "Investigations in Human Genetics with Cultivated Human Cells: A Summary of Present Knowledge," *The Control of Human Heredity and Evolution*, Tracy M. Sonneborn, ed. (New York: The Macmillan Company, 1965), pp. 76-77.

²⁵ Gordon Rattray Taylor, *The Biological Time Bomb* (New York: World Publishing Company, 1968).

tive gene materials in the constitutional makeup of the two parents. Some of this is already being done. The Beadles state a significant and sensible point of view on this matter of gene alteration: "Man knows enough but is not yet wise enough to make man. And therefore our best course is to assure maximum evolutionary flexibility for future generations by maintaining a high degree of wholesome genetic diversity among men."³⁸

Genetic counseling is an important development growing out of our tremendous advances in the biological sciences. In light of what has been discussed in this section, it is evident that if adequate tests can be made and data of many kinds can be collected on genetic patterns steps could be taken to prevent certain types of defects in children born to particular sets of parents. This whole area of development is called "genetic counseling."³⁹ The possibilities through such counseling, of preventing traumatic experiences for parents—the birth of defective children who will not develop as normal human beings—and the reduction of serious social problems are already evident. Herman J. Muller, one of the most eminent geneticists of this nation, stated the possibilities:

For persons who would concede the desirability of human genetic betterment, or at least the need of merely preventing genetic deterioration, the possibility of conducting it by some kind of parental selection should not be overlooked, for the technical difficulties of such an approach are incomparably less than those of genetic surgery, in view of the enormous wealth of diverse genetic combinations that are already in existence in any human population.⁴⁰

Such genetic counseling would cover a considerable range of activities, based on a thorough and comprehensive study of family characteristics of individuals for as many generations back as would be feasible. One biologist, more or less seriously, suggests that family reunions of the future may well include a session given over to reports to the genetic counselor, who would then have the data available for advising members of the family before they conceive children. With the potentialities of the computer, it can readily be seen that it would be feasible to have available in a data bank genetic information about individuals which would, of course, be private information but could be made available under proper authorization to a genetic counselor whenever a couple wished to consult him on their biological capabilities of bearing normal children.

³⁸ George and Muriel Beadle, p. 221.

³⁹ Detailed information in this field is available in Robert W. Stock, "Will the Baby Be Normal," *The New York Times Magazine*, 118, No. 40, 601:26-27 plus (March 23, 1969); and Henry T. Lynch, *Dynamic Genetic Counseling for Clinicians* (Springfield, Illinois: Charles C Thomas, Publisher, 1969).

⁴⁰ Herman J. Muller, "Means and Aims in Human Genetic Betterment," *The Control of Human Heredity and Evolution*, pp. 110-111.

Pollution and Control of Man's Environment

The modification of man's environment has been taking place since he became civilized enough to deal effectively in one way or another with his environment. Pollution and all of the related aspects of environmental alteration are conditions that will dramatically affect man's activities, his education, and his social and governmental institutions in the decades ahead.

Environmental pollution is defined by the Environmental Pollution Panel of the President's Science Advisory Committee as "the unfavorable alteration of our surroundings, wholly or largely as a by-product of man's actions, through direct or indirect effects of changes in energy patterns, radiation levels, chemical physical constitution and abundances of organisms."¹¹

Pollution of the air results from:

1. The residuals and by-products of the combustion of fossil fuels including oil, coal, and natural gas
2. Particles that are the by-products of manufacturing and chemical and smelting processes
3. Radioactive materials deposited as a result of nuclear change and other processes involving radioaction
4. The alteration of the oxygen content of the atmosphere as a result of a major change in the balance between oxygen-consuming things such as man and animals and the oxygen-creating plants that consume carbon dioxide and give off oxygen.

Water pollution results from:

1. The dumping of huge quantities of solid waste that are by-products or spent substances of manufacturing, smelting, and processing industries into our rivers, lakes and oceans
2. Rain water carrying fertilizers, insecticides, and herbicides from the land
3. Seepage of oil, gas, or other natural substances, usually minerals from deposits underneath the oceans
4. The dumping of huge quantities of sewage and wastes into our streams and lakes

Land pollution results primarily from:

1. The application of chemicals, in the form of fertilizers, insecticides, and herbicides to the soil
2. Fallout from pollutants in the air

¹¹ The Environmental Pollution Panel, President's Science Advisory Committee, *Restoring the Quality of Our Environment* (Washington, D C : Government Printing Office, 1965), p. 1.

3. The dumping of industrial wastes and unwanted containers and by-products of consumption on the land itself
4. The misuse of land by destroying natural beauty and altering land mass¹²

Food contamination in many forms may then result from the pollution of the air, water, or land. Chemicals deposited on the land may find their way into the bodies of food-producing animals through grazing, the breathing of polluted air, or the drinking of polluted water and into plant foodstuff through the chemical processes of plant growth, acquiring pollution both from the soil and air. Marine animals are affected by living in polluted streams, lakes, and oceans.

The effects of pollution and contamination are evident. Primarily our concern is with the effect of all types of pollution on the health of man, animals, and plants. But an equally serious matter is the happiness, the enjoyment, and the conditions of human life. Life lacks some of its zest and pleasure when one lives in an area that is constantly subjected to smog and contaminated air, or in which one must smell the nauseating odors of industrial processes, sewage, or discarded waste, or where the beauty and charm of natural surroundings has been destroyed.

Moral Pluralism and Shifts in the American Ethos

The people of this country, like the people in most nations of the modern world, are highly pluralistic in their concepts of moral behavior, ethical values, and social relationships. True, a basic moral code and an ethos undergird American life, but pluralism in many aspects of social interaction and individual behavior is characteristic of our society today. It seems evident that there has developed in recent years an even greater insistence on the right of the individual to determine for himself his own code of moral behavior and for organized agencies of society—particularly the theatre, motion pictures, and television—and for writers and artists to insist on the right to portray, advocate, and support modes of behavior they choose as acceptable and proper expressions of the "new morality." Many people, particularly college students and other young adults, openly defy and repudiate traditional modes of conduct and social behavior. Unquestionably, there is evidence of a rejection, even an open rebellion, against the mores and approved standards of social behavior that typically have characterized the American society, particularly as manifested and adhered to by middle- and upper-class members. In such a moral climate the secondary school educator is indeed troubled about the role of the

¹² David E. Elrick, "The Land: Its Future-endangering Pollutants," *Impact of Science on Society*, 19: 195-207 (April-June 1969).

school and the discharge of its responsibilities to the social group of which it is a part.

In some of its manifestations in recent years, revolt and rebellion against commonly accepted standards is anarchistic and nihilistic. A characteristic slogan of this approach to human behavior is the claim that "everyone should be permitted to do his thing" and whatever constituted his own "thing" was for the individual himself to decide, regardless of whether his actions were offensive to other people or disregarded the common set of codes of behavior practiced by the majority of people of the community.

Henry David Aiken, Professor of Philosophy at Brandeis University, believes that ". . . the phrase the 'new morality' suggests many things. For some it undoubtedly conveys the idea that we are undergoing the 'transvaluation of values' predicted by Nietzsche three-quarters of a century ago—possibly the first fundamental one since the onset of the Christian era."⁴³ Nevertheless, we would all probably have to agree with Aiken that ". . . in all events, the new morality is no flash in the pan. It has touched many people in widely different peer- and age-groups; writers, artists, scientists, ministers, teachers, intellectuals employed at various jobs of work."⁴⁴

But the seriousness of the situation is deplored by Professor Will Herberg, Graduate Professor of Philosophy and Culture, Drew University:

And this, indeed is our time's challenge to morality: not so much the all-to-frequent breakdown of a moral code, but the fact that today there seems to be no moral code to break down. . . . To violate moral standards while at the same time acknowledging their authority is one thing; to lose all sense of the moral claim, to repudiate all moral authority and every moral standard as such, is something far more serious.⁴⁵

And John W. Gardner, an eminent educator and formerly Secretary of the Department of Health, Education and Welfare in President Johnson's cabinet, warns:

We have in the tradition of this nation a well-tested framework of values: justice, liberty, equality of opportunity, the worth and dignity of the individual, brotherhood, individual responsibility. These are all supremely compatible with social renewal. Our problem is not to find better values but to be faithful to those we profess. Such values cannot be said to be alive unless they live in the acts of men.⁴⁶

⁴³ Henry David Aiken, "The New Morals," *Harper's Magazine*, 236:59 (February 1968).

⁴⁴ Aiken, p. 58.

⁴⁵ Will Herberg, "What Is the Moral Crisis of Our Time?" *The Inter-collegiate Review*, 4: 63-69 (January-March 1968).

⁴⁶ John W. Gardner, *The Recovery of Confidence* (New York: W. W. Norton & Company, Inc., 1970), p. 131.

Social history records that moral standards and attitudes toward social behavior in the past have swung between marked extremes of a very liberal and open attitude to one of rigid control and enforcement of social inhibitions. Nevertheless, it is obvious that secondary education in the future will be carried on in a social climate that has been significantly affected by the so-called "new morality" and that the movement in the late sixties of the younger generation openly and often violently to rebel against established institutions, customs, and approved modes of social behavior of the older generation will result in changed social conditions.

Yet most observers of the American scene agree that there must and will remain a basic, distinctive American character and ethos that provides a social structure within which education may be carried on. In an interview, Gunnar Myrdal, the shrewd Swedish student of American life, says that:

... there is no country on earth which has more of a common, explicit ideology—more of a common, explicit morality, I might say. This is the old Enlightenment ideal: dignity of the human individual, justice between people, liberty, equality of opportunity and brotherhood. You may call this the American Conscience . . . in spite of serious setbacks, the trend is toward a gradual, ever-better fulfillment of these ideals.⁴⁷

Shifts in Occupational Patterns

Certainly, one of the most significant social and economic trends for educational planning in the years immediately ahead and for the remainder of this century is the marked shift that is now occurring and probably will be extended in the occupational patterns of the American people. Although the trend has been underway for a number of years, Figure 3 reveals the nature of the predicted change during the single decade from 1965 to 1975. The total labor force of the nation will increase about 20 percent during this period while the percent employed in services, government, and contract construction will grow much faster than the total labor force. The percent of people employed in trade, finance, insurance, and real estate will grow at about the same rate as the labor force itself, but the growth in transportation, public utilities, and manufacturing will be considerably less. The percent employed in mining and agriculture will actually decrease during the decade. It should be recognized that Figure 3 shows only the estimated percent change in the number of people employed in the various categories, not the total number employed. Manufacturing, even though it will not grow as fast as some of

⁴⁷ Gunnar Myrdal with J. Robert Moskin, "The American Conscience," *Look*, 32, No. 26, p. 32 (December 24, 1968). For a more dismal view of America's future see Andrew Hacker, *The End of the American Era* (New York: Atheneum Press, 1970).

the other occupational groups is, and will remain, the largest industry in the United States.

Within the broad occupational classification shown in Figure 3 there is a great diversity in jobs, requiring differing levels of education and skill. For a more accurate look at the situation it is desirable to examine demands for workers within narrower occupational groups.

Studies by the U.S. Department of Labor show that: "Employment in professional and related occupations will show the fastest growth over the next 10 years—twice as fast as overall employment. These occupations generally require the most formal educational preparation to qualify for

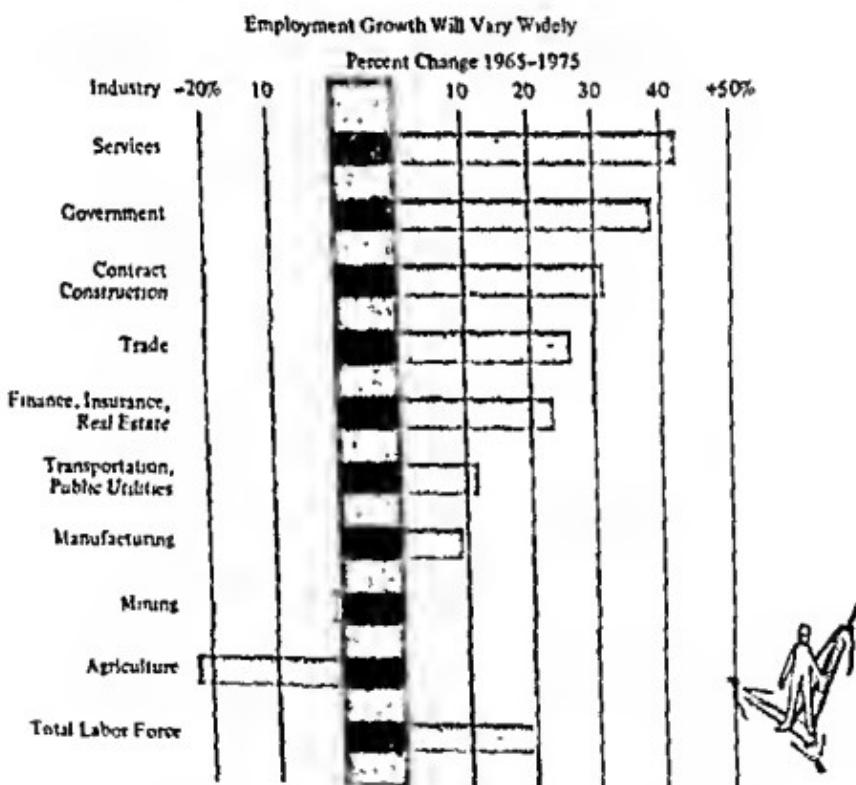


Figure 3. Percent change in number of persons employed in major occupational groupings, 1965 to 1975. Source: U.S. Department of Labor, Bureau of Labor Statistics, Occupational Outlook Handbook, 1968-1969 edition, Bulletin 1550, p. 16; and Manpower Report of the President, 1969, p. 63 (Washington, D.C.: Government Printing Office, 1968 and 1969).

employment.⁴⁸ The percent change between 1965 and 1975 in employment in professional, technical, and kindred occupations will be about 44 percent; for services of a wide variety of types, about 33 percent, and for clerical and related types of occupations, about 30 percent. The percent change in the number employed as managers, officials, and proprietors and those employed in skilled and in sales occupations will increase in about the same ratio as the total labor force, approximately 20 percent.⁴⁹

Teaching is the largest of the professions in terms of total number employed and demands continue to be great. The nation's staff of teachers, elementary through college, will have to increase about one-third (650,000 persons) during the decade from 1965-1975. But in addition, nearly three times this number (1.8 million) will be required to fill teaching positions vacated because of retirements, transfers, and deaths.⁵⁰

Scientific and engineering fields will also be rapidly expanding and the percentage change in these occupations will even exceed the approximately 44 percent increase in the total professional group. The demand for people at all levels of employment in the health services will also increase tremendously.

Based on the major social, economic, and political trends discussed earlier in this chapter, it is obvious that there will be an increasing demand for highly specialized types of professional and service workers in occupations concomitant with the new conditions that develop in our nation in the years ahead.

Big Government

As quoted by Warner and Trimm, a recent Director of the Budget stated that "the United States government is the world's biggest spender, lender, borrower, employer, property owner, tenant, and insurer."⁵¹

The development of big government at the local, state and federal level has been taking place at an accelerated pace since World War II. A significant clue to the rise of big government is seen in the data presented in Table 9.

One of the great social and political problems facing the people of this nation in the decades ahead is that of providing through government

⁴⁸ U.S. Department of Labor, Bureau of Labor Statistics, *Occupational Outlook Handbook*, 1968-1969 edition, Bulletin No. 1550 (Washington, D.C.: Government Printing Office, 1968) p. 17.

⁴⁹ *Occupational Outlook Handbook*, p. 19.

⁵⁰ *Occupational Outlook Handbook*, p. 19.

⁵¹ Quoted in W. Lloyd Warner and John H. Trimm, "The Rise of Big Government," *The Emergent American Society*, Vol. I, *Large Scale Organizations*, W. Lloyd Warner, Daryl B. Unwalla, and John H. Trimm, eds. (New Haven: Yale University Press, 1967), p. 560.

Table 9. Federal and State and Local Governmental Expenditures, 1942-1969

<i>Year</i>	<i>Federal Government</i>	<i>State and Local Governments</i>
1942	\$ 34,662,000,000	\$ 10,914,000,000
1950	42,429,000,000	27,905,000,000
1955	70,342,000,000	40,375,000,000
1960	90,289,000,000	60,999,000,000
1965	118,996,000,000	86,554,000,000
1967 (est.)		105,978,000,000
1970 (est.)	194,400,000,000	

Source: U.S. Bureau of the Census, *Statistical Abstract of the United States: 1969* (Washington, D.C.: Government Printing Office, 1969), p. 407 and 375.

the services and welfare required in a modern age while finding ways for the ordinary citizen to share in decision- and policy-making processes.⁴²

Another aspect of the expanding role of government of great interest to educators is the increasing involvement of the federal government in the educational programs of this country. Until the period following World War II, the direct participation of the federal government in the establishment and operation of the schools was limited to the grants of land beginning in 1787 with the passage of the Northwest Ordinance to new states for the establishment of schools, and the allocation of aid for vocational education through the Smith-Hughes Law passed in 1917, and subsequent related laws. Table 10 shows that the federal government made grants of slightly more than 100 million dollars to the states in 1945 for direct support of educational programs. By 1969, these grants had increased more than 80-fold, a total of 8½ billion dollars. The total expenditures of the federal government for education and activities related to education shows an even more stupendous increase.

Most authorities agree that federal support for education in all aspects—elementary, secondary, and higher education—will continue to increase rapidly in the years ahead. The principal concern of educators, however, is not the increasing involvement of the federal government in education, in terms of financial support, but the nature and character of such support and the types of controls the federal government may exercise over educational institutions.

⁴² See especially Peter F. Drucker, "The Sickness of Government," *The Age of Discontinuity* (New York: Harper & Row, 1968), Chap. 10.

Table 10. Federal Grants to the States for the Support of Education, Administered by the U.S. Office of Education, and Total Federal Expenditures for Education and Related Activities, 1945-1969

Year	Amount of Grants to the States	Total Federal Expenditures for Education and Related Activities
1945	\$ 102,000,000	\$ 291,500,000
1953	338,198,000	1,437,389,000
1959	737,865,000	2,413,186,000
1965	954,717,000	7,651,400,000
1968	3,215,359,000	12,960,100,000
1969	8,381,300,000	13,544,200,000

Source: U.S. Bureau of the Census, *Statistical Abstract of the United States* (Washington, D.C.: Government Printing Office), Tables 198 and 197, appropriate years (1945 data supplied by the U.S. Office of Education).

Schooling for a Changing World

In this chapter the authors have identified and discussed briefly what they believe to be the social trends, social conditions, and national and world-wide developments that should have significant impact on the secondary schools of this nation during the remaining years of this century, and be major influences in shaping the character and nature of the program of education provided the young people of America during this period.

What kind of schooling in the 1970s will best prepare youth for life in the twenty-first century? How does the teacher educate his students for a changed and a continuously changing world? This, of course, is the fundamental question in education—how does the school carry out its social functions of properly preparing the young for the life of the future?

The remainder of the book deals with this question in different contexts, considering the various aspects of secondary education—programs for schooling youth, instruction, goals to be attained, teaching methods for realization of goals, administrative and organizational structures for operating schools, and the like. In Chapter 12 we present our views on what the high schools of the future should be like. We will conclude this chapter by listing what we believe are the hallmarks of a program of schooling for youth who will live their lives in a world that will differ significantly from the world in which they will grow to maturity.

During his school career he should be able to analyze and come to understand the kinds and nature of talents and capabilities he possesses. The school should instill the desire to achieve self-realization as fully as possible.

7. Help youth develop the kinds of behaviors and the attitudes and desires that enable them to achieve mutually satisfying relationships with members of their family, both in the parental home now and in their own home when established, friends, associates in their work, neighbors, social groups, and people with whom they deal formally and informally. During lifetime from birth to death one is continuously associated with people. Most people on their own initiative are able to achieve satisfactory relationships with others, but some need help, and the high school is a logical place to assist them with their human relationships. The example of teachers and classmates is a prime contribution, but courses in family living and units on human relationships may be needed.

8. Develop the kinds of behaviors and the attitudes and desires that will enable youth now and throughout their lifetime to participate effectively and responsibly in social and political groups that are necessary or desirable in carrying on the organized group life of the nation. Everyone of necessity must be a member of large groups—political, business, labor, professional, and the like. The school should develop an interest in political and social action and an understanding of the processes of democratic government.

9. Help the student develop a sensitivity to social, political, cultural, and economic conditions and create a desire to participate as effectively as possible in the solutions of problems as they arise in the nation and world. High school students in recent years have shown increasing interest in political and social action, and this is encouraging.

10. Assist youth in developing, or expounding and refining, a sense of compassion, a concern for the well-being of people, a desire that all benefit as fully as possible from full democracy and the American dream in the original sense of that concept. As the world becomes more crowded and more complex, people must increasingly work together if decency and humanness are to prevail. The role of the high school in contributing to the development of humanness may be nebulous, but its own institutional arrangements and the mode and climate of the relationships of its own students and faculty are important.

11. Provide the basic knowledge and develop the attitudes that enable each person to maintain good mental and physical health. Without good health all else loses much of its significance. School health programs must be improved and the foundations of mental health enhanced by the quality of its own group relationships.

12. Provide the basis for achieving competency in an occupation. Success in an occupation is essential. Whether the high school should provide overt programs of vocational training is questionable, but it can lay the foundations for a successful career by the kinds and quality of programs described previously.

Additional Suggestions for Further Study

1. Commoner, Barry, *Science and Survival*. New York: The Viking Press, 1966. The author, dubbed the "Paul Revere of Ecology," writes passionately about the quality of American life, and the ways in which science is destroying our planet. His proposals for survival have been widely acclaimed.
2. de Bell, Garrett, ed., *Environmental Handbook*. New York: Ballantine Books, Inc., 1970. Source materials selected for use in the First National Environmental Teach-in April 22, 1970. Excellent material on current ecological problems.
3. Ehrlich, Paul R., and Anne H. Ehrlich, *Population, Resources, Environment: Issues in Human Ecology*. San Francisco: W. H. Freeman and Company, 1970. A comprehensive study, with ample research data, on matters relating to man and his relationships to the environment. Excellent section on population problems, and a thought-provoking section on threats to man's existence.
4. Ehrlich, Paul R., and others, "The Biological Revolution," *The Center Magazine*, 2:28-49 (November 1969). Reports from a conference held by the Center for the Study of Democratic Institutions on the nature and character of the biological revolution. Identifies problems created and suggests significant things that may be done to meet these problems.
5. Gardner, John W., *The Recovery of Confidence*. New York: W. W. Norton & Company, 1970. An insightful essay on America of today, and a blueprint for developing a better future by a keen observer of American life. He has faith in the ability of the people to solve our problems and to correct the deficiencies of personal and group life that are now manifest.
6. Hauser, Philip M., ed., *The Population Dilemma*, 2d ed. Prepared for the American Assembly, Columbia University. Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1969. This is one of the best volumes on the population explosion, with problems and issues identified.
7. Mesthene, Emmanuel G., *Technological Change: Its Impact on Man and Society*. Cambridge: Harvard University Press, 1970. The author explores the manner in which technological innovations create both new opportunities and new problems for society, and social, political, and economic reorganization needed to realize maximum benefits from technology.
8. Moore, John A., *Science for Society: A Bibliography*. Washington, D.C.: American Association for the Advancement of Science, 1970. The literature on the matters presented in this Chapter is extensive and diverse. Hence, we are listing here one of the best bibliographies available on many of these subjects, with the suggestion that students consult it for additional readings. It is classified by subjects and includes both books and articles.
9. Moynihan, Daniel P., ed., *Toward a National Urban Policy*. New York: Basic Books, Inc., 1970. Twenty-four leading experts discuss the problems of the urban city and what needs to be done to improve the quality of urban life.

10. National Academy of Sciences, Committee on Resources and Man, *Resources and Man*. San Francisco: W. H. Freeman, and Company, 1969. This comprehensive study of various aspects of man's relation to his environment contains 26 significant recommendations, some on general policies for the nation and some on specific things that should be done to preserve our resources. The chapters consider a number of the topics treated here.
11. President's Council on Environmental Quality, *Environmental Quality*. The First Annual Report of the Council on Environmental Quality. Washington, D.C.: Government Printing Office, 1970. A special study group appointed by President Nixon made this significant report on August 10, 1970. The report calls for sweeping changes in American life to protect man against his own violations of the natural ecology. The Council urges many reforms and Congressional actions that must be taken at once to restore the proper balance among all elements in our natural habitat.
12. Shepard, Paul, and Daniel McKinley, eds., *The Subversive Science Essays Toward an Ecology of Man*. Boston: Houghton Mifflin Company, 1969. A collection of searching and provocative essays on the ecology of man. The selections point to the necessity of providing a healthy, productive, and attractive environment for the well-being of man. Are we trading baubles and trappings of a civilization for pleasurable surroundings and a measure of territorial security?
13. Taylor, Gordon Rattray, *The Doomsday Book*. Cleveland: World Publishing Company, 1970. A British writer on life in the future foresees serious threats to man unless drastic steps are taken to correct abuses of the environment. Although addicted to sensationalism, Taylor's writings are worthy of study.
14. "The Conscience of the City," Special Issue, *Vaedalus*, 97, No. 4 (Fall 1968). In this 350-page issue, distinguished urbanists analyze the conditions of urban cities and life today, and propose solutions for many of the problems now plaguing city dwellers.
15. White House Study Group on National Goals, *Toward Balanced Growth: Quantity With Quality*. Washington, D.C.: Government Printing Office, 1970. A White House Study Group presented this report to the President in August 1970. It reported research data and findings on many problems of national concern, ranging from population to consumer indignation. Education receives consideration, with the committee suggesting that college attendance should be de-emphasized. Population and urbanization receive major attention.

CHAPTER 3

Characteristics of the Youth To Be Educated

In introducing the discussion of social trends and developments in Chapter 1, we indicated that the two fundamental factors in the process of education are the young to be educated and the social group that postulates the purposes, aims, and objectives of schooling, establishes the schools, and controls the program and institutional structures. In Chapter 3 we will look at the other of these two fundamental factors in the educational process—the pupils to be educated. We will not only present some data and information on the size, character, and nature of the enterprise that has been established for the education of secondary-aged youth, but will also present some significant and important information and concepts about youth themselves—their characteristics, their motivations and aspirations, their problems, their frustrations, how they seem to see themselves in the world of today and of the future, and other matters of importance for us professionals who teach in and direct the secondary schools.

Obviously, we could devote an entire book itself to the many kinds of information and generalizations teachers need about the youth who are to be educated in our high schools. But most teachers or prospective teachers have already taken or will take one or more college courses in educational psychology, the psychology of adolescence, and related subjects. It is unnecessary to repeat such information here. Rather, the authors have chosen to select topics felt to be especially significant and important for planning the program of secondary education in this country in the decades ahead, about which we present recent data, concepts, and points of view concerning characteristics of the student population that may not have been considered fully in psychology courses for teachers. We emphasize that such treatment does not mean that we are overlooking the needs, interests, concerns, and developmental characteristics of the entire body of youth, now about 15 million strong, who are the potential

enrollees in our high schools, but rather that we feel a few limited aspects of the subject of this chapter merit special consideration at this time.

How Many Youth Attend School?

Secondary schooling is but one part of a program of education that extends from kindergarten through graduate institutions. To grasp the size and nature of the enterprise in the United States today, Table 11 presents information on enrollments at the elementary, secondary, and higher education levels for the decades from 1899 through 1960 and two recent sets of data, one from the 1965-1966 biennial survey of education, and the other for 1969, the latest available estimates.

Enrollment in Secondary Schools

More information on the numbers enrolled and the type of secondary school they attend is shown in Table 12. This table also gives projected enrollments for grades 9-12 of both public and nonpublic secondary schools through the fall of 1977. These projections are made by the National Center for Educational Statistics of the United States Office of Education. At the time these predictions were made by the National Center, all of the children who will be enrolled in grades 9-12 in the fall of 1977 had already been born; hence, we can place high confidence in them as reflecting the growth of secondary schools in this country during most of the decade of the 1970s.

Table 11. Enrollment in Educational Institutions, by Level of Instruction, 1899-1900 to Fall 1969

Year	School Level			Total
	Kdg.-Grade 8	Grades 9-12	Higher Ed.	
1899-1900	16,261,846	699,403	237,592	17,198,841
1909-1910	18,528,535	1,115,398	355,215	19,999,148
1919-1920	20,963,722	2,500,176	597,880	24,061,778
1929-1930	23,739,840	4,811,800	1,100,737	29,652,377
1939-1940	21,127,021	7,129,979	1,494,203	29,751,203
1949-1950	22,207,241	6,453,009	2,659,021	31,319,271
1959-1960	32,412,266	9,599,810	3,215,544	45,227,620
1965-1966	35,759,153	13,020,823	5,526,325	54,306,301
Fall 1969*	36,900,000	14,600,000	7,100,000	58,600,000

* Estimated.

Source: U.S. Office of Education, *Digest of Educational Statistics-1969 Edition* (Washington, D.C.: Government Printing Office, 1970), Tables 1 and 3.

Table 12. Enrollment in Grades 9-12 in Regular Public and Nonpublic Day Schools 1899-1900 to 1965-1966 and Projected to Fall 1977; and Enrollment in Schools Designated as "Secondary" by Reporting Public and Nonpublic Units, 1959-1977

Year	<i>Enrollment in Grades 9-12</i>			<i>Enrollment in "Secondary Schools"^b</i>
	<i>Public Schools</i>	<i>Nonpublic Schools^a</i>	<i>Total</i>	
1899-1900	519,251	180,152	699,403	
1909-1910	915,061	200,337	1,115,398	
1919-1920	2,200,389	299,787	2,500,176	
1929-1930	4,399,422	412,378	4,811,800	
1939-1940	6,601,444	528,535	7,129,979	
1949-1950	5,724,621	728,388	6,453,009	
1959-1960	8,484,869	1,114,941	9,599,810	12,276,000
1965-1966	11,691,808	1,329,015	13,020,823	16,904,000
<i>Projected</i>				
Fall 1971	13,900,000	1,400,000	15,300,000	20,300,000
Fall 1973	14,600,000	1,400,000	16,000,000	21,200,000
Fall 1975	15,100,000	1,400,000	16,500,000	21,800,000
Fall 1977	15,200,000	1,400,000	16,600,000	21,800,000

^a Includes small number enrolled in special federal schools, subcollegiate schools of colleges, and residential schools for exceptional children.

^b In part, estimated (see source for definitions and assumptions).

Sources: U.S. Office of Education, *Digest of Educational Statistics: 1969 Edition* (Washington, D.C.: Government Printing Office, 1970); and U.S. Office of Education, *Projection of Educational Statistics to 1977-1978: 1968 Edition* (Washington, D.C.: Government Printing Office, 1969) Table 2 and 3.

Another interesting bit of data is provided in this table. So that the data are comparable for the years during which the U.S. Office of Education has collected statistics since its founding in 1867, they are reported for enrollments in grades 9-12, the traditional grade level of the American high school. However, in recent decades the junior high school has been established and in educational circles this level of schooling is also regarded as being secondary rather than elementary in nature. But practices vary among school systems and among the states in reporting enrollment data by type of school, and what is called a junior high school in one school system may not comprise the same grade levels as a similarly named school in another system. Nevertheless, the U.S. Office of Education in recent years has reported enrollments and predicted enrollments through 1977 for schools simply labeled as "secondary schools" by the reporting school systems.

Turning our attention to enrollments in grades 9-12 we note that the number of pupils attending high schools approximately doubled each

decade from the school year 1899-1900 through 1929-1930. By 1960, 30 years later, enrollments had again doubled. By 1970, 15 million pupils were enrolled in grades 9-12 of the secondary schools of this nation. If we accept the definition of secondary schools used individually by the states, the total enrollment was 20 million.

Anticipated Enrollments

But this phenomenal growth in secondary school enrollments will not continue during the 1970s. In the first place, the number of births in the United States reached its peak in the early 1960s and tapered off considerably from that high point of 4,317,000 to a low of less than 3,500,000 by the end of the decade. This means, as is shown in Table 13, that the number of young people aged 10-19 will remain relatively stable through 1985.

Another factor that will slow down the rate of growth in the secondary schools is the already widespread enrollment of young people in secondary schools; there will be little gain in enrollment due primarily to the higher percentage of enrollees.

Looking even further ahead, the Census Bureau predicted an average annual increase of two-thirds of a million young people in the last decade of the century and the first 15 years of the twenty-first century. Even though rates of birth per 1000 of population may remain at a lower level, such as was true in the late 1960s, the large increase in the number of

Table 13. Projections of the Population, 10-19 Years of Age of the United States, 1970-2015

Year	Projected Population (Series C)*		Total
	10-14 years	15-19 years	
1970	20,668,000	19,100,000	39,768,000
1975	20,741,000	20,807,000	41,548,000
1980	19,056,000	20,879,000	39,935,000
1985	21,514,000	19,200,000	40,714,000
1990	24,586,000	21,651,000	46,237,000
1995	26,923,000	24,713,000	51,636,000
2000	27,738,000	27,042,000	54,780,000
2005	28,433,000	27,855,000	56,288,000
2010	30,086,000	28,548,000	58,634,000
2015	32,607,000	30,195,000	62,802,000

* For explanation see Table 2.
 Source: U.S. Bureau of the Census, *Projections of the Population of the United States by Age, Sex, and Color to 1990, with Extensions of Population by Age and Sex to 2015, Current Population Report, Series P-25, No. 281* (Washington, D.C.: Government Printing Office, 1967), Tables 4 and 16.

young people reaching marriageable age predicates a great increase in population potentials for secondary schools 20 years hence.

Graduation and Dropout Rates

Although enrollment in secondary schools has grown by leaps and bounds since 1900, secondary education is still not universal; not all young people today complete a program of secondary schooling.

The tremendously large increase in secondary school enrollments in recent decades has been due to two factors: (a) rapid expansion in the population of the United States, particularly since 1945 as was shown in Chapter 2; and (b) a much greater demand among young people for secondary education, as evidenced by the much higher percentage of young people who are enrolled in educational institutions. Table 14 illustrates the situation. Enrollment in school among 10-13-year-old children has been almost universal since 1930 and virtually universal for 14- and 15-year-olds by 1960. Although a great increase has occurred in the percentage of young people aged 16-24 who attend educational institutions, particularly since 1950, not all of this age group, even among 16- and 17-year-olds, are attending school.

Graduation from High School

A considerable understanding of the educational attainments and status of American youth may be gained from a study of Table 15, which reveals the extent to which the young people of this country are pursuing a formal education at the present time. The last two rows of figures provide this insight. Of all 20-24-year-olds in this country in 1969, the Census Bureau estimated that 78.3 percent had graduated from high school, assuming that all of those who entered college had in fact graduated from

Table 14. Percent of Youth Enrolled in School, 1930, 1950, 1960, and 1966

Age Group	1930	1950	1960	1966
10-13 years	97.1	98.6	99.5	99.3
14 and 15 years	88.8	94.7	97.8	98.6
16 and 17 years	57.3	71.3	82.6	88.5
18 and 19 years	25.4	29.4	38.4	47.2
20-24 years	7.4	9.0	13.1	19.9

Sources: U.S. Bureau of the Census, *Population: 1930*, Volume II (Washington, D.C.: Government Printing Office, 1933), p. 1097; and U.S. Office of Education, *Digest of Educational Statistics: 1968* (Washington, D.C.: Government Printing Office, 1968), p. 4; (figure for 20-24 years for 1930 obtained from *Population: 1940*, Vol. II, Part 1, p. 34).

secondary school or fulfilled equivalent requirements. And further support for this astounding rate of graduation from secondary school in the United States is provided by the data for the same year for the 25-29- and 30-34-year-olds. Although not quite as many of these age groups had completed high school, the figures still reveal that more than seven out of ten of all of the people of appropriate age in the United States who were under 35 years of age in 1968 had graduated from high school. We can readily conclude from these data that at least three out of every four young people in the United States today are graduating from high school.

Table 15. Percent of Young Adults According to Highest Level of Schooling Completed, 1940, 1960, and 1969

Highest Level of School Completed	Age Group								
	30-24 years			25-29 years			30-34 years		
	1940	1960	1969	1940	1960	1969	1940	1960	1969
None	0.9	0.6	— ^a	1.0	0.7	— ^a	1.3	0.7	— ^a
Elementary School Only									
1-4 years	4.4	1.6	1.1	4.9	2.1	1.3	5.8	2.6	1.7
5-7 years	11.6	5.2	2.6	13.8	6.6	2.8	15.6	8.1	4.4
8 years	15.2	6.4	3.0	19.7	8.0	4.8	23.1	9.8	5.4
High School Only									
1-3 years	23.1	22.7	15.0	22.0	21.8	16.3	20.6	23.0	18.2
4 years	31.6	39.9	42.6	24.7	37.6	44.1	19.1	34.3	43.8
College									
1-3 years	9.1	18.0	27.0	7.2	12.0	14.6	7.4	10.6	11.8
4 years	3.3 ^b	4.5	7.0	5.8 ^b	7.2	10.0	6.3 ^b	6.7	9.0
5 or more years	—	1.2	1.7	—	3.8	6.0	—	4.1	5.6
Percent completing high school	44.0	63.6	78.3	37.7	60.6	74.7	32.8	55.7	70.2
Percent entering college	12.4	23.7	35.7	13.0	23.0	30.6	13.7	21.4	26.4

Note: 1940 figures include a category of "not reported" which is less than 1% in each instance.

^a Included in 1-4 years category for 1969.

^b Includes 4 or more years of college for 1940 data.

Source: U.S. Bureau of the Census, *Population: 1940*, Vol. II, Part I; *Population: 1960*, Vol. 2; and *Current Population Reports*, Series P-20, No. 194 (February 10, 1970) (Washington, D.C.: Government Printing Office).

As a matter of fact, it is not unrealistic to presume that the figure may be close to four out of every five inasmuch as a few of the 20-year-olds will still complete secondary school, and increasingly a larger number of young adults who had not graduated at the normal age are now completing high school through adult high schools, correspondence study, and other forms of individual study that result in certification of the equivalent of a high school diploma through a system of nationally standardized tests.

This amazing level of educational attainment among the entire population of the United States has really been achieved during the last quarter of a century. Table 15 shows that less than half of all young adults of the appropriate age group had completed a program of secondary schooling in 1940. The number of young people graduating from high school has increased an average rate of almost 1.2 percentage points per year. Secondary education in the United States is rapidly becoming as universal as elementary schooling was two decades ago.

A second significant fact indicated by Table 15 is the high rate of continuation of young Americans into college. Somewhat more than one-third (35.7 percent) of all persons 20-24 years of age in 1969 had already enrolled in college. Considering the possibility that some of the 20-24-year-old group had not yet completed secondary school or had delayed entrance into college because of military service or other reasons, it seems quite apparent that at the present time approximately 38 percent of the appropriate age groups are entering college.

Among the older age groups listed in Table 15 about half of those who entered college had remained for four or more years; it is very likely that this ratio has increased in recent years. Hence, we may also conclude that 20 percent of the appropriate age cohort group are now completing at least four years of college.

Rate of Dropout

However, these facts about the universality of elementary and secondary education, the very high rate of entrance into collegiate education, and completion of a degree or professional program among our young people of today should not blind us to a very disturbing fact—in the early 1970s about one person in five of an appropriate age cohort group is not completing a formal program of secondary education. The "dropouts" will be discussed in the next section.

These very important conclusions about the educational attainments of American youth are summarized in Figure 4.

Figure 4 takes account of a group of high school graduates for whom it is difficult to obtain accurate information—the young people who enroll in noncollegiate postsecondary schools of many kinds, both public and private, including nonprofit and proprietary institutions. These insti-

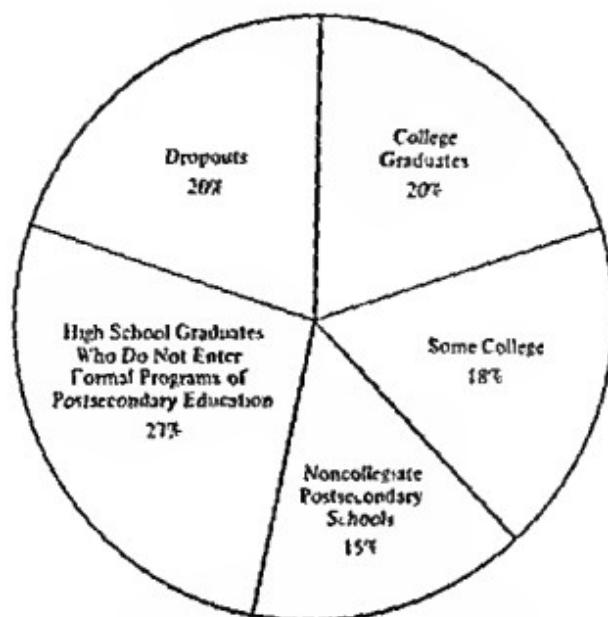


Figure 4. Educational attainments of the appropriate age groups in the early 1970s.

tutions include noncollegiate schools of nursing—including practical nursing programs—all sorts of public vocational and technical institutes and schools, noncollegiate programs offered by community and junior colleges and other educational institutions, private schools offering instruction in such fields as cosmetology, barbering, mechanics, auto repair, electronics, heavy machinery, construction and building trades, business, and a great variety of other programs. Except for public institutions that must report enrollment data to state authorities, figures are not generally available from these types of noncollegiate institutions. Studies of high school graduates by particular school systems and state departments of education provide some base for estimating the extent to which young people enroll for formal programs of education either full time or part time in these types of institutions. We estimate the figure at 15 percent but recognize that this is only an approximation, although the best we can make at this time.

The remainder of an age group, estimated at 27 percent, is composed of those young people who graduate from high school but who, within the following few years, at least, do not enroll in formal organized programs of postsecondary education. It is recognized that many of them will participate in one or more kinds of educational programs which do not fit into the category of a planned sequential program for career or general education objectives in a formally recognized educational institution.

The High School Dropout

A high school dropout is defined as an individual who did not graduate from high school, which, universally in the United States, is based on 12 grades of schooling beyond the kindergarten level.

The Extent of Dropping Out

In the previous section we estimated, on the basis of the best data obtainable at this time, that 20 percent of the youth in the United States today of the appropriate age group drop out of high school prior to graduation. This contrasts with a dropout rate of approximately 35 percent as recently as 1960; in 1950, it was estimated that not more than half of the youth of the appropriate age groups were graduated from high school.

With approximately 4 million persons comprising each age cohort group of the secondary school population at the present time, it is evident that even with the very low rate of 20 percent, at least 800,000 young people are dropping out of high school at the present time. During the decade from 1960 to 1970, at least 7,500,000 young adults in the United States dropped out of high school. Although the extent to which young people graduate from high school in the United States far exceeds the rate in any other country of the world, educators nevertheless recognize that dropping out of high school constitutes a serious problem in American life. The reasons for such a statement will be evident later in this discussion.

Inasmuch as schools are administered by local school districts, the rate of dropout in individual schools within the districts or in the district itself is of utmost importance in planning educational programs for youth. Dropout rates among pupils enrolled in secondary schools that serve the slum area of a central city may run as high as 60 percent, while there may be practically no dropouts in schools serving a high income residential area. Daniel Schreiber in his study of holding power in large city systems presents some evidence on the dropout rates in 128 cities of the United States.¹

Robert A. Dentler and Mary Ellen Warshauer made an elaborate analysis of dropout rates and factors correlated with dropouts in 131 of the largest cities in the United States. They show in two tables an amazing variation in the rates of dropout among large cities. Nashville, Tennessee, and St. Louis, Missouri, for example, show the highest dropout rate as they calculate it, among whites—28 percent; the lowest rate was in Dearborn, Michigan, 7 percent. In the adjoining city of Detroit, it was 15 per-

¹ Daniel Schreiber, *Holding Power/Large City School Systems* (Washington, D.C.: National Education Association, 1964).

cent. Berkeley, California, had a rate of 8 percent; across the Bay in San Francisco the rate was 17 percent. The dropout rate among nonwhite youth not only contrasted markedly in some cities (but not in others) with the rate for whites, but shows even greater range among the 131 cities. The rates for nonwhites are 24 percent for Nashville, 25 percent for St. Louis, Dearborn (which has a small nonwhite population) zero percent, Detroit 22 percent, Berkeley 8 percent, and San Francisco 14 percent. But in Boston, Massachusetts, and Dallas, Texas, the rate was 35 percent, in Miami, Florida, 36 percent, and in Phoenix, Arizona, 34 percent.²

A comprehensive statewide study of high school dropouts, made in 1965 for the state of Colorado, showed that although the total dropout rate was 25.2 percent for the entire state (considering all persons for which no information was available as dropouts), the rates vary from as low as 12.3 percent in the region of Eastern Colorado to 30.0 percent for the metropolitan Denver area. Interestingly, the Colorado Springs—Pueblo area, just a short distance south of Denver, showed a dropout rate of only 19.1 percent.³

Who Drops Out of School?

Many studies of the characteristics of school dropouts have been made, and we can quickly draw on these reports for a description of these youngsters, for most of them present a common picture.

In their extensive analyses of the dropout problem in large cities, Dentler and Warshauer give the most complete and definitive profile of the school dropout:

The recurrent attributes common to high school dropouts are easy to catalogue. The model dropout is a low school achiever, usually below grade level for his age, he is a member of a low-income family in which the parents have low educational attainment. He participates infrequently in the extra-curricular life of his student peers. . . . Clinically oriented researchers tend to find character disorders. . . . Sociologically oriented researchers tend to find disorganized families and associated evidence of poor early socialization. . . .

Given the high positive intercorrelations between low educational, occupational, and economic attainment of parents, racial minority group membership, and marital and family disorganization, we may lump the

² Robert D. Dentler and Mary Ellen Warshauer, *Big City Dropouts and Illiterates* (New York: Frederick A. Praeger, Publishers, 1968), Tables B-2, Column 18, and B-3, Column 19.

³ Colorado State Department of Education, Colorado Dropout Project, *Analysis of Dropout Statistics of the Colorado Dropout Research and Action Project* (Denver: The Department, 1965), Appendix L, p. 7.

surface attributes of the dropout together and view him as *deprived* . . . (but) the dropout is not *culturally deprived*. The standard of culture advanced by the school is but one standard among many; and in our society, schools are supposed to buttress some degree of cultural pluralism. In the same sense, social deprivation is ambiguous.

If we work with the connotation of deprivation, we make better headway. We can then conclude that the high school dropout is *educationally disadvantaged*. If he wants to live by the rules of the school game, his chances are reduced by counterpressures from his home and his environment outside the school. If he is uncertain about the merits of staying in high school and graduating, his "background" and the response of educators to their own internalized assumptions about that background may reduce his ability to remove that uncertainty. In this event, the disadvantaged student is one who is vulnerable to determination from without. . . . The dropout is *educationally disadvantaged* because, at any one moment, his behavioral setting includes forces that constrain him to quit school. That setting contains self, family, peers, and the school.⁴

Lucius F. Cervantes, a sociologist who has done a great deal of research in the area of extended "Friend-Family System," also made an extensive investigation of a matched group of youth, half of whom had continued their education till graduation and half of whom had dropped out. He particularly investigated the relationship of the Friend-Family System and social background of the youth to dropping out. He concludes his entire study by presenting the following 20 characteristics that are commonly found among youths who drop out:

DROPOUT PREDICTION TABLE

School

1. Two years behind in reading or arithmetic at seventh-grade level. Majority of grades are below average.
2. Failure of one or more school years (1st, 2nd, 8th, 9th grades most commonly failed, 85% of dropouts behind one year; 53% two or more years).
3. Irregular attendance and frequent tardiness. Ill-defined sickness given as reason.
4. Performance consistently below potential.
5. No participation in extracurricular activities.
6. Frequent change of schools.
7. Behavior problems requiring disciplinary measures.
8. Feeling of "not belonging" (because of size, speech, personality development, nationality, social class, family disgrace, retardation in school, dress, lack of friends among schoolmates or staff, etc.).

Family

9. More children than parents can readily control (e.g., only child

⁴ Dentler and Warshauer, pp. 5-6.

for divorced and working mother; five or more for non-divorced and working mother of blue- and lower white-collar class).

10. Parents inconsistent in affection and discipline.
11. Unhappy family situation (common acceptance, communication, and pleasurable experiences lacking; family solidarity minimal).
12. Father figure weak or absent.
13. Education of parents at eighth-grade level.
14. Few family friends; among these few many problem units (divorced, deserted, delinquents, dropouts).

Peers

15. Friends not approved by parents.
16. Friends not school oriented.
17. Friends much older or much younger.

TAT (Psychological orientation)

18. Resentful of all authority (home, school, police, job, church).
19. Deferred gratification pattern weak.
20. Weak self-image.⁵

In one of the most extensive treatises on the school dropout, Edgar Z. Friedenberg, a sociologist who often serves as adult interpreter of the adolescent, writes in very bitter and disquieting terms about dropouts in the urban cities:

They are ill-disciplined. They have no basic skills. They are so sore that any place you touch them hurts; and when they hurt, they hurt back. They are extremely parochial, limited in their experience of the world to a few city blocks of desolate slums, and therefore, both gullible and suspicious about anything beyond it. They are sometimes homeless; they never have any quiet place to study and think . . . They live, their teachers sometimes say, like animals; and as they say it, a ghost sobs, harshly.⁶

Norman M. Chansky, who made an extensive study of Operation Second Chance, a project in North Carolina to prepare dropouts for employment, describes the dropouts with whom they worked in three areas of that state in the following terms:

The dropout views himself a disenfranchised, second class citizen. He is not a part of the mainstream of the local social groupings. He craves social acceptance. Moreover, he wants to "amount to something" so that he will be treated like any other human being. Frequently, he

⁵ Lucius F. Cervantes, *The Drop Out: Causes and Cures* (Ann Arbor: The University of Michigan Press, 1965), pp. 198-199.

⁶ Edgar Z. Friedenberg, "An Ideology of School Withdrawal," *Profile of the School Dropout*, Daniel Schreiber, ed. (New York: Random House, Vintage Books, 1968), p. 23.

lacks the connections which would plant him in the mainstream of the community. Had he the connections, his lack of social courtesies would prevent him from entering into the mainstream. He feels, he hopes, he accepts rejection stoically, he despairs, he hopes again, he aspires to improve himself in the face of many social barriers. Sometimes he gives up; most often he drives onward anticipating social rejection. Often he has difficulty expressing his feelings in articulate English.⁷

This, then, is in general what our dropouts are like, although as in any educational matter, we must recognize the tremendous range of variation from individual to individual and the great weight of individuality among any group of young people about whom we write. And this particularly applies to the dropouts, for there are dropouts who fit scarcely any or none of the characteristics listed by the reports just cited, and undoubtedly none that fits all of them.

Causes of Dropping Out

We should never confuse a description of the traits and characteristics of individuals who drop out of school with the causes. Traits may be indicative of at least some of the causes, but the basic underlying causes of dropout lie much deeper in the cultural and educational pattern of the communities in which these children live. Dentler and Warshauer particularly point this out in their study:

As previous studies have shown, there are complex, psychological processes involved in dropping out of school. But we have in this study provided substantial evidence showing that these processes occur under predictable community conditions. Withdrawing from high school before graduation is therefore not an event to be diagnosed, prevented, or treated individually. High school withdrawal should be viewed ecologically.

Thus, the ecological variable is an index of community advantage that includes poverty, occupational mix, underemployment, and overcrowding of housing stock. A strong linear relation obtains: the lower the level of advantage within a great city, the higher that city's dropout rate will be, relative to other cities. . . . The high school dropout withdraws under the structural constraints of a social and economic context of low advantage. . . .

This pattern is one in which the odds that militate against graduating from high school for any given American adolescent vary notably from community to community, and these odds are in turn mainly a function of the odds militating against demographic and economic growth for any given community. No doubt there are important psychological

⁷ Norman C. Chansky, *Untapped Good: The Rehabilitation of School Dropouts* (Springfield, Ill.: Charles C Thomas, Publisher, 1966), p. 137.

and educational determinants of withdrawal from high school. But in the aggregate, withdrawal is associated more relevantly with growth prospects present not in the student but in the city he inhabits.⁸

These scholars are, in effect, telling us that the child who grows up in a slum section of our urban cities and whose family is a victim of poverty and all of the attendant conditions drops out of school in large part at least because of the environmental web in which he is caught. The social, economic, emotional, intellectual, and cultural aspects of his life strongly impel him towards dropping out of school, often as soon as the law will permit. Dropping out becomes very much the thing to do in terms of the environmental pressures and conditions under which he lives. He truly has been fundamentally and basically shaped by his environment, and the cumulative effect of this complex syndrome of factors is to encourage him to drop out of school.

But there are other reasons for dropping out. A small percentage of an appropriate age group cannot complete school because of serious illness, incapacitating physical and mental conditions of various kinds, and incarceration in penal and corrective institutions. Early marriage and the related changes in the social and familial status of a high school student may lead to dropout, either because of pregnancy or a changed social status not only of the individual himself but in his relations to the peer group with whom he or she has been associated. Children living in isolated rural areas may find it difficult to complete high school because they lack motivation to overcome the conditions imposed by isolation.

Although desegregation was ruled illegal by the Supreme Court in 1954, the racial factor is undoubtedly still a factor in dropout. The Census Bureau estimates that only 57.4 percent of all nonwhites 25 to 29 years of age in 1969 had graduated from high school, contrasted to 76.9 percent of all whites. In 1960, the comparable figures were 38.6 percent and 63.5 percent; in 1940, 12.1 and 40.9.⁹

Another factor in dropout is simply the inability of the adolescent or young adult to succeed in the type of program offered by the school he would have to attend. His academic ability, as measured by the typical intelligence test, is such that he has faced failure and discouragement throughout much of his school career, and when he has passed the compulsory age those frustrations, disenchantments, and disillusionments are too much for him and he chooses to drop out rather than to continue in an educational system in which he knows that he will not succeed.

A fair number of dropouts are identified as bright by standard ability

⁸ Dentler and Warshauer, pp. 54-58, *passim*.

⁹ U.S. Bureau of the Census, *Current Population Reports*, Series P-20, No. 194 (Washington, D.C.: Government Printing Office, February 19, 1970), Table 1.

testing procedures but nevertheless fail to graduate. In a significant study of this problem Joseph L. French insists that "each year more than 80,000 youth who are within the top 25 percent of the nation's population intellectually, who have the scholastic potential for higher education, and who have the occupational potential for a job requiring a high-level intellectual power leave school before graduation."¹⁰

French lists reasons high-ability students in his sample in Pennsylvania gave for withdrawing. Whether these are the real reasons is not determinable, but more than three-fifths of the females in his study dropped out because of pregnancy or marriage. French speculates that the male dropout of high ability is a happy-go-lucky fellow who is interested in people. Although he tends to be easygoing, his actions are marked with deliberateness and his speech with frankness. His profile does not suggest lack of interest in school and much that school represents, but it does indicate that the school's pressures for conformity might create a stumbling block for him.¹¹

In summary, we may say then that the real causes for dropout are numerous and varied, and must be determined on an individual basis. Nevertheless, a major factor in dropping out may be described as ecological, particularly in relation to youth who live in the slums of large urban cities and in sparsely settled rural areas. Interwoven with this environmental situation—for more than half of the youth in these same sets of circumstances do graduate from school—are social, emotional, intellectual, and familial factors that are conducive to school withdrawal.

The Disadvantaged and the Deprived

In presenting evidence on the causes of dropout, Dentler and Warshawer, Friedenberg, and Chansky all emphatically insisted that disadvantageousness and social and economic deprivation were the major factors. These are also the same underlying factors, as we shall discuss later in this section, that affect an intellectual underdevelopment and educational retardation. Disadvantageousness and deprivation are primarily in the form of discrimination because of race, inadequate family life, incpt, inadequate, and sometimes even invalid education, low incomes or complete dependence on welfare payments, grossly inadequate housing and living conditions, different social and moral values from those of the predominant middle classes, and personal rejection by members of social groups in control of our social, economic, and political institutions and agencies of group life.

¹⁰ Joseph L. French, "Characteristics of High Ability Dropouts," *Bulletin of the National Association of Secondary School Principals*, 53:68 (February 1969).

¹¹ French, p. 75.

Negro and Other Nonwhite Americans

It is obvious to anyone studying social conditions in this country that race is a major factor in disadvantageousness. Members of a minority group or the minority races—Negroes, American Indians, Spanish-Americans, Chinese, Japanese, or other nonwhite races—are disadvantaged simply because they are members of minority groups.

In 1940, as is shown in Table 16, 10.4 percent of the total population of this country was composed of members of nonwhite races, primarily the Negro race. In 1960 they comprised 11.4 percent, and it is estimated that by 1990 as many as one of every seven persons in the United States will be a member of a nonwhite race. The nonwhite population is increasing each decade at a faster rate than is the white population.

A most significant fact about the Negro in America is the great increase in the portion of Negro people who live in the central core of our great metropolitan areas. Table 17 reveals that although the ratio of Negroes (it should be pointed out that the previous table included all nonwhites while this table includes only Negroes) in metropolitan areas increased from 9 percent of the total population in 1950 to 12 percent in 1969, in the central cities themselves the increase was from 12 percent in 1950 to 21 percent in 1969, a marked shift in the proportion of Negroes to whites and other races. Moreover, in the great cities of a million or more population the proportion of Negroes to whites doubled during this 19-year period. The Department of Labor concludes that:

The Negro population in the central cities is now so large, that with present birth and death rates, substantial growth in the nonwhite population is inevitable. And in-migration is certain to continue, although possibly at a declining rate, since employment opportunities in agriculture are expected to go on declining in the foreseeable future.¹²

Occupations and Employment

The nature of the disadvantageousness of the Negro and other nonwhite citizens in their vocational opportunities is illustrated by Table 18, in which the percent of white employed workers in various types of occupations is shown in contrast to the percentage of the nonwhite employed persons engaged in the same cluster of occupations. For example, the percent of employed white people engaged in the occupations grouped under the first five headings, which generally are considered to be the most desirable and higher-paid occupations, far exceeds the percent of

¹² The President of the United States and The United States Department of Labor, *Manpower Report of the President and a Report on Manpower Requirements, Resources, Utilization, and Training* (Washington, D.C.: Government Printing Office, 1967), p. 91.

Table 16. Number and Percent of Population of the United States According to Race, 1940-1960 and Projections to 1990

Year	White			Nonwhite*		
	Number	Percent of Total Popula- tion	Percent Increase Each Decade	Number	Percent of Total Popula- tion	Percent Increase Each Decade
1940	118,357,831	89.6	—	13,807,298	10.4	—
1950	135,149,629	89.3	12.4	16,176,169	10.7	14.6
1960	158,831,732	88.6	14.9	20,491,443	11.4	21.1
—Projected (Series B, only)—						
1970	181,753,000	87.7	12.6	25,573,000	12.3	19.9
1980	210,771,000	86.6	13.8	32,520,000	13.4	21.4
1990	244,985,000	85.5	14.0	41,516,000	14.5	21.7

* Includes Negroes, Indians, and members of other nonwhite races.

Source: U.S. Bureau of the Census, *Statistical Abstract of the United States, 1969* (90th edition) (Washington, D.C.: Government Printing Office, 1969), Table 29; and *Current Population Reports, Series P-25, No. 381* (Washington, D.C.: Government Printing Office, 1967), Tables 2 and 3.

employed nonwhite persons engaged in these same clusters of occupations. A much larger ratio of nonwhite workers is employed in service occupations, in private households, and as laborers than is true for white workers.

One encouraging factor in the situation is the significant change in occupational patterns for nonwhites during the period from 1960 to 1969. For example, the number of nonwhites employed in professional and tech-

Table 17. Percent of Total Population Inside and Outside Metropolitan Areas, Negro, 1950-1969

Area	Percent Negro		
	1950	1960	1969
United States	10	11	11
Metropolitan areas	9	11	12
Central cities	12	17	21
Central cities in areas of 1,000,000 or more	13	19	26
250,000 to 1,000,000	12	15	18
Under 250,000	12	12	12
Suburbs	5	5	5
Smaller cities, towns, and rural	11	10	9

Source: U.S. Bureau of Labor Statistics and U.S. Bureau of the Census, *The Social and Economic Status of Negroes in the United States, 1969*, BLS Report 375 (Washington, D.C.: Government Printing Office, 1970), p. 41.

Table 18. Employment by Occupations, 1969, and Percent Net Change from 1960 to 1969, by Race

Occupation	Employed 1969				Percent change from 1960 to 1969	
	White		Nonwhite		White	Non- white
	No.	%	No.	%		
Professional and technical	10,031,000	14.4	692,000	8.3	41	109
Managers, officials, and so on	7,721,000	11.1	254,000	3.0	12	43
Clerical	12,282,000	17.7	1,078,000	12.9	33	114
Sales	4,488,000	6.5	163,000	1.9	9	61
Craftsman and foremen	9,485,000	13.7	704,000	8.4	17	70
Operatives	12,379,000	17.8	1,998,000	23.9	17	41
Service workers, except private household	6,371,000	9.2	1,525,000	18.2	32	26
Private household workers	900,000	1.3	712,000	8.5	- 9	- 28
Nonfarm laborers	2,809,000	4.0	876,000	10.5	8	- 8
Farmers and farm workers	2,986,000	4.3	366,000	4.4	- 31	- 56
Total United States	69,452,000	100.0	8,369,000	100.0	18	21

Source: U.S. Bureau of Labor Statistics and U.S. Bureau of the Census, *The Social and Economic Status of Negroes in the United States, 1969*, BLS Report 375 (Washington, D.C.: Government Printing Office, 1970), p. 41.

nical occupations during this seven-year period increased 109 percent while employment of whites in the same cluster of occupations increased only 41 percent. Similarly, the situation is encouraging in the other preferred occupational categories. Officials in the Bureau of Labor Statistics of the U.S. Department of Labor conclude that "Negroes and members of other minority races made significant progress on the occupational ladder in 1969. Although at year's end they still held a disproportionately large share of the nation's least desirable jobs, their most rapid employment gains for the year were achieved in the higher-skill, higher-status occupations."¹³

¹³ Paul O. Flaim and Paul M. Schwab, "Employment and Unemployment Developments in 1969," *Monthly Labor Review*, 93:43 (February 1970).

Unemployment among Negroes and other nonwhites is always higher in every set of figures released by the Department of Labor than it is for white workers. The figures for 1969 are as follows:¹⁴

<i>Group</i>	<i>White</i>	<i>Nonwhite</i>
Adult men	1.9%	3.7%
Adult women	3.4	6.0
Teenagers (16-19)	10.8	24.4
Total	3.2	6.5

It is the young Negro seeking work who suffers from discrimination particularly, although the unemployment rate for white teenagers is also high.

Poverty

One of the most crushing and serious aspects of disadvantageousness is poverty. Not only do inadequate incomes result in many other types of disadvantageousness, particularly in social, cultural, and educational deprivation, poverty itself is a result of unemployment, poor health, and other undesirable conditions. In fact, most aspects of disadvantageousness are so closely interrelated, it is hard to say which is cause and which is effect. The devastating effects of this syndrome of factors on youth is evident.

The extent of poverty in the United States and the overwhelming preponderance of it among nonwhite families is revealed by these data:¹⁵

	1959		1968	
	<i>White</i>	<i>Nonwhite</i>	<i>White</i>	<i>Nonwhite</i>
Percent of families below the poverty level (\$2973 in 1959 and \$3553 in 1968)	15	50	8	28

Although an encouraging note is the fact that the percentage of American families on a less than subsistence level has decreased nearly half since 1959, a substantial number of nonwhite families, mostly Negro, still live in circumstances in which children are seriously disadvantaged.

Another aspect of disadvantageousness and poverty is the extent to which people in the United States must depend on welfare payments for

¹⁴ U.S. Bureau of Labor Statistics and U.S. Bureau of the Census, *The Social and Economic Status of Negroes in the United States, 1969*, BLS Report 375 (Washington, D.C.: Government Printing Office, 1970), p. 30.

¹⁵ U.S. Bureau of Labor Statistics and U.S. Bureau of the Census, p. 22.

subsistence. As is shown in this summary, total public aid payments—restricted to what is commonly designated as public welfare or relief and not including a vast array of other social welfare expenditures—amounted to about 13.5 billion dollars in 1968-1969.¹⁵

<i>Fiscal Years</i>	<i>Total Expenditures for Public Aid</i>
1928-1929	\$ 60,000,000
1939-1940	3,597,000,000
1949-1950	2,496,200,000
1959-1960	4,101,100,000
1968-1969	13,442,900,000

As is predictable, a far larger percent of Negroes and other nonwhite persons are on welfare rolls than white persons. The study previously cited states that 16 percent of nonwhite persons received welfare payment in 1968 compared to 3 percent of white persons.¹⁷

The paradox in the welfare situation is well stated by Daniel P. Moynihan, the eminent sociologist who was appointed special adviser on urban affairs by President Richard Nixon in 1969:

The 1960s have seen an economic expansion in the United States of all but unimagined proportions. . . . Yet with each year of growing affluence the number of persons dependent on public charity also grows. In many cities the growth has been quite startling. New York is now at the point where 10 percent of its population and 20 percent of its children live on welfare.¹⁸

Cultural and Intellectual Disadvantageousness

Much has been written in recent years on the clearly established relationship between cultural disadvantageousness or advantageousness and intellectual and educational development. Benjamin Bloom summarizes a vast body of research on the subject in this manner:

There is little doubt that intelligence development is in part a function of the environment in which the individual lives. . . . The evidence so far available suggests that extreme environments may be described as abundant or deprived for the development of intelligence in terms of the opportunities for learning verbal and language behavior, opportunities for direct as well as vicarious experience with a complex

¹⁵ Alfred M. Skolnik and Sophie R. Dales, "Social Welfare Expenditures, 1968-1969." *Social Security Bulletin*, 32:5 (December 1969).

¹⁷ U.S. Bureau of Labor Statistics and U.S. Bureau of the Census, p. 26.

¹⁸ Daniel P. Moynihan, "The Crisis in Welfare," *The Public Interest*, No. 10 (Winter 1968), p. 4.

world, encouragement of problem solving and independent thinking, and the types of expectations and motivations for intellectual growth. . . .

The effects of the environments, especially of the extreme environments, appear to be greatest in the early (and more rapid) periods of intellectual development and least in the later (and less rapid) periods of development. . . . In terms of intelligence measured at age 17, about 50% of the development takes place between conception and age 4, about 30% between ages 4 and 8, and about 20% between the ages 8 and 17. . . . A conservative estimate of the effect of extreme environments on intelligence is about 20 I.Q. points.¹⁹

Cultural deprivation results in a low level of language development and cognitive growth, inability to symbolize adequately, very limited language and linguistic ability, drastically restricted range of experiences, both socially and intellectually, low level of motivation or desire to engage in reading or activities carried on in a school setting, and, as Kingsley Price points out, the inability to accept or reject a "certain set of beliefs, techniques, and values" that constitute the essence of the humanistic culture, for "this humanistic culture is the good life."²⁰

In a very insightful review of research on the disadvantaged and the presentation of conclusions based on their own research, Stodolsky and Lesser broadened the definition of disadvantageousness and insist that it include not only the social-class factors of low socioeconomic status and minority racial status resulting in sets of environmental conditions associated with poverty or low income, poor housing, and the like, but also:

. . . environmental circumstances which are closely articulated with developmental processes and which vary considerably within and across social-class and ethnic lines. Particular clusterings of environmental circumstances known to be related to developmental processes would lead to identification of disadvantaged status in more complex but precise terms. . . . A new definition of "disadvantaged" should include psychologically meaningful statements about the environment and the child.²¹

The eminent cultural biologist, Rene Dubos, states the matter of cultural deprivation even more bluntly:

Most slum children, unfortunately, continue to conform to the ways of their destitute parents, despite intensive efforts by social workers to change their habits and tastes. By the third or fourth year of life their behavioral patterns have already been environmentally and culturally

¹⁹ Benjamin S. Bloom, *Stability and Change in Human Characteristics* (New York: John Wiley & Sons, Inc., 1964), pp. 88-89.

²⁰ Kingsley Price, "The Problem of the Culturally Deprived," *The Record—Teachers College*, 69:123-131 (November 1967).

²¹ Susan S. Stodolsky and Gerald Lesser, "Learning Patterns in the Disadvantaged," *Harvard Educational Review*, 37:488-489 (Fall 1967). The entire article is an excellent treatment of the subject.

determined. Furthermore there is much reason to fear that they will in turn imprint similar patterns on their own children. It is not accurate to state that slum children are culturally deprived; the more painful truth is that slum life imprints on them a culture from which they are usually unable to escape.²²

Deficiency in the use of language is cumulative in effect, contributing to other aspects of cultural deprivation. This type of deprivation is particularly serious in terms of motivation to participate and undertake typical kinds of school learning activities, which depend to such a large extent on mastery of language and ability to use words and symbols effectively.

Since Arthur R. Jensen published an article on the subject in 1969,²³ an intensive debate on the relative roles of heredity and environment in determining the nature and level of intellectual development, specifically that aspect of mental abilities measured by the traditional intelligence test and designated by the IQ quotient, has raged in academic circles. That both nature and nurture shape the life and characteristics of an individual cannot be gainsaid, but we will never be able to determine statistically the relative influence of each, for no child can ever be born without an inheritance of genes that influence development; yet he can never grow and develop without an environment that shapes the nature and character of growth; scientists can never separate the two into independent variables and hence cannot accurately test the influence of each.

But why argue about the matter at all? As Benjamin Bloom so insightfully states:

The psychologist and the geneticist may wish to speculate about how to improve the gene pool—the educator cannot and should not. The educator must be an environmentalist—bridled or unbridled. It is through the environment that he must fashion the educational process. Learning takes place within the child; the educator tries to influence this learning by providing the appropriate environment. If heredity imposes limits—so be it. The educator must work with what is left, whether it be 20% of the variance or 50%. What he must recognize, however, is that the environment which influences the child is not limited to what happens in the school house or classroom. Much of the environment has had its effects before the child enters school and a good deal of the environment

²² René Dubos, *So Human an Animal* (New York: Charles Scribner's Sons, 1968), p. 80.

²³ Arthur R. Jensen, "How Much Can We Boost IQ and Scholastic Achievement?" *Harvard Educational Review*, 39:1-123 (Winter 1969). For a further discussion of his article and this whole matter of hereditary influences on intelligence, see also the entire issue of the *Harvard Educational Review*, Vol. 39 (Summer 1969); earlier articles on the subject by Jensen and Ernest Caspary in the *American Educational Research Journal*, Vol. 5, No. 1 (January 1968); and Fred T. Wilhelms and Patricia F. Waller, "The Education of the Intellect," Special Issue, *Bulletin of the National Association of Secondary School Principals*, 53, No. 336 (April 1969).

continues outside of the school. Only as the educator recognizes the difficulties he faces, can he adequately help the pupils with whom he works.²⁴

Disadvantageousness of whatever form—social, cultural, filial, or economic—means also educational and intellectual disadvantageousness. The relationship among this entire syndrome of factors is evident in the research. One of the most comprehensive pieces of research on the entire subject of educational opportunities and the achievement of disadvantaged children, particularly Negroes, is contained in the widely cited and extensively discussed Coleman report.²⁵ This national survey was made by the United States Commissioner of Education in carrying out a provision of the Civil Rights Act of 1964.

Unequal educational opportunities for the disadvantaged rest not so much in the fact that they do not attend school, at least during the normal years for elementary and secondary education, but rather in the quality and nature of the education provided children in the schools which they do attend. *De facto* and *de jure* segregation that existed before the Supreme Court decision of 1954 and other types of inequality of educational opportunity contribute to this wide disparity in the quality and nature of the educational program provided the disadvantaged.²⁶

The most shocking collection of evidence on conditions in the slums and ghettos, particularly with relation to the disadvantageousness of children of the urban poor, is contained in the widely discussed and almost sensational report of the National Advisory Commission on Civil Disorders, made to the President of the United States on March 1, 1968. The report presents a large body of information on conditions of life in the slums and ghettos of our cities and the causes for these conditions. The section on education is particularly significant in bringing together evidence on school conditions, expenditures for education, and other matters indicating the inequality of educational opportunity for disadvantaged pupils.²⁷

²⁴ Benjamin S. Bloom, "Chairman of Advisory Board Replies to Dr. Jensen's Article," ERIC, Vol. 3, No. 4, National Laboratory on Early Childhood Education, University of Illinois (May 1, 1969).

²⁵ James S. Coleman and others, *Equality of Educational Opportunity* (Washington, D.C.: Government Printing Office, 1966). A useful summary of this comprehensive study is contained in U.S. Commission on Civil Rights, *Racial Isolation in the Public Schools*, Volume I (Washington, D.C.: Government Printing Office, 1967), pp. 2-14; 73-114.

²⁶ For excellent discussions of the matter of inequality and factors that produce such conditions, see "Equal Educational Opportunity." A Special Issue, *Harvard Educational Review*, Vol. 38, No. 1 (Winter 1968); and Martin Deutsch, Irwin Katz and Arthur R. Jensen, eds., *Social Class, Race, and Psychological Development* (New York: Holt, Rinehart and Winston, Inc., 1968).

²⁷ National Advisory Commission on Civil Disorders, *Report* (Washington, D.C.: Government Printing Office, 1968).

Rebellious, Militant, Alienated, and Delinquent Youth

In a book on education of secondary-age youth, it is necessary that we examine in some detail the characteristics of two other groups of our youth. The first we may lump together under the broad general heading of rebellious, militant, and alienated, and the other, perhaps somewhat similar in characteristics, we may describe as delinquent. The youth included in such categories may or may not be disadvantaged. Obviously not all alienated, rebellious, and delinquent youth are disadvantaged in terms of the conditions described in the previous section, or, on the other hand, should we make the mistake of assuming that disadvantaged youth are necessarily rebellious, militant, alienated, or delinquent. Some youth may be both disadvantaged and rebellious, but the two sets of characteristics should not be confused. The nature of disadvantageousness may cause some to be rebellious, or delinquent, but this is certainly not true of all of them.

Nature and Extent of Militancy

Dissent, protest, and, in instances, open rebellion in recent years has centered primarily in two groups and two principal sets of circumstances and social conditions. The first, and probably most significant, has been the civil rights movement, starting as a nonviolent protest against discrimination of Negroes but finally erupting in the mid-1960s in a violent period of burning, looting, and killing in many urban cities of the United States. The more orderly and nonviolent demonstrations, mass meetings, parades, and boycotts were often overlooked or discounted during this period of open attack on civil authority and on those who represented the established order of suppression and discrimination.

The other focal point of open defiance and outright rebellion was the "Establishment" which was attacked by college and university students and other young adults. Their protests and violence were aimed at the organized institutions of society, particularly its institutions of higher education and the military—specifically with respect to the war in Vietnam and the draft. In more modest actions, protests were staged against any established agency, particularly of government or of big business, that negated the individualism of the person or that was not only a symbol of but often itself actively engaged in governmental and business undertakings that seemed, at least to the dissenters, to mitigate against the development of their full individuality and the opportunities for self-development, self-expression, and other aspects of selfhood. Often it was perhaps simply an unrecognized protest against the complexities of a modern, industrialized, highly institutionalized society.

In a highly diverse and pluralistic society, resentment against the efforts of the majority to impose its will on the entire social group or of those in control of the agencies of government and the vehicles for socialization to demand compliance, particularly on the part of the young, with their interpretation of the accepted codes of moral behavior is to be expected, and, as Mulford Q. Sibely points out in his study of dissent, has long historical roots.²⁸ In a special study made for the National Commission on the Causes and Prevention of Violence, appointed by President Johnson in 1968, Graham and Gurr trace the history of violence and show that it has long historical antecedents, both in this country and abroad, and that it has been waged by both student groups and segments of the populace at large.²⁹

Confining our attention to the protest and rebellion among youth and young adults that erupted in the 1960s, we may take as a starting point the movement among Negro students for civil rights. "Sit-ins" occurred spontaneously in February 1960 in Negro student communities in several southern states, particularly North Carolina, Virginia, Florida, and Mississippi. The sit-ins, demonstrations, and marches by Negro students had a profound effect on Northern white students, and the student movements of the early 1960s were primarily devoted to civil rights for Negroes. It was later that violent riots, with destruction of property, loss of life, and armed conflict, broke out in some of our major cities, but these were not a part of the planned, organized, and overt student protest movement.³⁰

In addition to riots, there were nonviolent demonstrations, marches, teach-ins, and similar evidences of protest among both Negroes and whites, particularly those of the so-called new student left movement. An example of such a large-scale demonstration was the march on Washington by an estimated quarter of a million people in August 1963.

The first major overt demonstration composed primarily of students and directed against matters that deeply concern students was the uprising on the University of California campus at Berkeley, continuing in various degrees of violence from September to December 1964.³¹

²⁸ Mulford Q. Sibely, "Anonymity, Dissent, and Individual Integrity in America," *The Annals of the American Academy of Political and Social Science*, 378:45-57 (July 1968).

²⁹ Hugh D. Graham and Ted R. Gurr, eds., *The History of Violence in America* (New York: Frederick A. Praeger, 1969).

³⁰ For accounts of these events and the nature of the riots in urban cities, see Lewis S. Feuer, *The Conflicts of Generations: The Character and Significance of Student Movements* (New York: Basic Books, Inc., Publishers, 1969), pp. 399-407; Joseph Boskin, "The Revolt of the Urban Ghetto, 1964-1967," *The Annals of the American Academy of Political and Social Science*, Special Issue on "Protest in the Sixties," Vol. 382, pp. 1-14 (March 1969); Report, The National Advisory Commission on Civil Disorders, pp. 35-108.

³¹ Christopher G. Katopis and Paul G. Zolbord, eds., *Beyond Berkeley: A Sourcebook in Student Values* (Cleveland: The World Publishing Company, 1966).

Since that fateful mass demonstration at Berkeley, student uprisings on college and university campuses during the remainder of the 1960s and continuing through the present time, have become commonplace. Some of the more serious and more intensive protest movements have occurred at Columbia University, San Francisco State College, Cornell University, Harvard University, the City College of New York, and Chicago University.³² In May 1970, following the invasion of Cambodia by armed forces of the United States, riots and strikes occurred on many campuses, some very serious.

Turning more directly to the secondary school, probably it could be seen as inevitable that this unrest, open rebellion, and militant action against established authority would sooner or later occur in the secondary schools. And indeed it did. Up to the present time it has not been as extensive and widespread among secondary schools nor as violent, disruptive, or militant as in colleges and universities, but open organized protest in defiance of established authority has occurred in a large percent of the secondary schools.³³

The extensive and unprecedented extent of student uprisings, violent protests by youth, and militancy of all kinds during the second half of the 1960s is, obviously, a complex and diversified set of movements that grew out of a number of basic factors—social, political, and economic conditions, and psychological motivations. We will try to analyze briefly what seems to us and to many writers on the subject some underlying causes and conditions for this widespread militancy of youth today.

Why Student Militancy?

Social class status. Kenneth Keniston, a psychiatrist who writes most insightfully about youth, believes that much of the student unrest of today grows out of two "highly explosive social revolutions": the demand that many citizens who traditionally have been excluded from the mainstreams of social, economic, and political life be now included as full-time citizens with all the privileges, benefits, and rights of the privileged members; and, to some extent opposing the first social demand, the concern of young people, who by reason of the socioeconomic status of their parents are therefore already "in," about the meaning and quality of life in our present socioindustrial society.

He identifies three major groups of young people in these contexts: the "excluded," the "tenuously in," and the "solidly in." The excluded, of

³² An insightful and excellent analysis of student unrest is Stephen Spender, *Year of the Young Rebels* (New York: Random House, 1969).

³³ J. Lloyd Trump and Jane Hunt, "The Nature and Extent of Student Activism," *Bulletin of the National Association of Secondary School Principals*, 53:150-158 (May 1969).

course, are the blacks, the Indians, the Mexican-Americans, but also excluded are a vast number of whites in the low social classes, the poverty-stricken, and poorly educated. The nature of the discontent and rebelliousness of this group is obvious—they want in. The tenuously in are those youth who are socially mobile upward, and now, often as the first member of their family group, have entered college. They bring a different set of motivations to college campuses and similarly to the high school. They want to retain their foothold, to advance within the system, and to enjoy what the solidly in already have. They do not want the system eroded now that they are on the way up. The solidly in are so sure of their status, have so long enjoyed the benefits of having parents who are social, political, and economic successes that they now question the system itself. They do not reject the system outright, but they question the values of adults and the quality and meaning of life in today's world.³⁴ The differing nature and character of the protests of the three groups will be evident in the ensuing discussion.

The generational conflict. Many sociologists and anthropologists believe that there continues throughout the history of mankind a conflict between generations—the older generation endeavoring to control and rule the lives of the younger generation and the younger generation in turn trying to throw off the shackles of authority and control. In the process of preparing the young to live in the society of the adult, and to carry on his social institutions and processes and exemplify to the fullest his values, traditions, and modes of conduct, the young have been coerced, restricted, treated in an infantile manner, and subjected to bureaucratic control that throughout modern history has given rise to more or less severe conflicts between generations.

In more recent history, young people have been attempting to change the nature of social institutions, social controls, and social processes that the older generation is attempting to impose on them or use to control them. We are seeing a more active revolt primarily because the young are much better educated than they have ever been before and the great measure of affluence in our society and the commitment of the government to the protection and enhancement of the welfare of people have removed to a large measure the utter dependence of youth on the older generation. There has been a resurgence of idealism that results in a revulsion against the crass materialism, the utter selfishness, the sham, the false pretenses, and the inanities that exist in the adult society.³⁵

³⁴ Kenneth Keniston, "What's Bugging the Students?" *Educational Record*, 51: 116-129 (Spring 1970); also see "American Youth: Its Outlook Is Changing the World," Special Issue, *Fortune*, 89:1, pp. 66-164 (January 1969).

³⁵ For extended discussions of the generation gap see Feuer, "Protest in the Sixties," *The Conflict of Generations: The Special Issue of the Annals of the American*

Circumscription of youth and pressures to conform. Closely related to the basic factor of generational gap is a set of overt circumscriptions imposed on youth by the older generation. These restrictions are regarded by the older generation as essential to preparation for and induction into the life of the adult society. Among the present generation, these restrictions have become so irksome and frustrating that youth is willing to protest, often in a violent manner, against these demands and pressures.

Unquestionably the pressures on the young to conform, particularly those from families in the large middle and upper classes, has intensified in recent years. Competitiveness in the professional and business world is intense, and the desire of practically every parent to see his child succeed necessitates, the adult believes, close and incessant conformity to the mores of the social group that constitutes the power structure of the political, business, and social world. The youth is under pressure to conform to whatever version of the Puritan ethic his parents and their circle of friends promulgate, while he often is aware that they themselves fail, sometimes shockingly, to adhere to the same ethical code.

In many circles of American society, the pressure to go to college and to make certain to qualify for admission to the collegiate institution of choice, regardless of what its standards of admission may be, to make the right contacts in college, to establish a reputation as a true all-American type, to marry "well," to make the right connections, and finally, to get the right kind of job or to establish oneself in the right kind of profession is unquestionably "turning off" many young people today.³⁵

Infantilism and the meaninglessness of conditions and requirements. Heaped on the psychological and social factors producing militancy among youth today, but adding to the conflict between generations, is a whole set of conditions, requirements, regulations, and attitudes toward youth that, in many respects, constitute a type of infantilism and to them, represent unnecessary, unwarranted, and repugnant restrictions on their conduct and individuality. Rules and regulations about dress and personal

Academy of Political and Social Science for March 1969 (especially the articles by Edgar Z. Friedenberg and John Robert Howard); and Margaret Mead, *Culture and Commitment: A Study of the Generation Gap* (New York: The Natural History Press, 1970).

³⁵ Excellent discussions of this aspect of the student revolt are in Seymour Martin Lipset, *American Student Activism in Comparative Perspective*, Seminar on Manpower Policy and Program (Washington, D.C.: Government Printing Office, 1968). Faculty Commission, *Crisis at Columbia*, Report of the (Cox) Commission (New York: Vintage Books, 1968); Julian Foster and Durward Long, eds., *Student Activism in America* (New York: William Morrow & Company, Inc., 1970); Theodore Roszak, *The Making of a Counter Culture* (New York: Doubleday & Co., 1969); and Abraham J. Tannenbaum, ed., "Alienated Youth," *The Journal of Social Issues*, Special Issue, 25:2 (Spring 1969).

appearance are examples of things that provide occasions for student demonstration.

Efforts, particularly of the university and to some extent the secondary school, to serve in *loco parentis* during school hours or while the student is enrolled in the institution often also result in protest movements of some sort.

Regardless of the specific type of control, the real cause of complaint among students generally is the demeaning, debasing, condescending attitude of the authorities and faculties of the educational institutions that degrades or denies the capabilities and willingness of the student to conduct himself in a manner that respects his own personality.

Injustice. Another very important factor in much of the militancy among youth today lies in the injustice and inequality that characterizes the lives of many young people. The chief injustices are discrimination against Negroes in many aspects of social, economic, and political life, the conditions imposed on many people by poverty, low income, and welfarism, conscription for military service in wars which many young people insist are not justified, and the inability of the great mass of people to participate in the processes of government.

The struggle of the black people for equality and justice is, of course, a major aspect of the unrest of youth at the present time. They make common cause with youth who are rebelling against other kinds of injustice, for denial of human rights to one group condones injustice to others.

Threats to future existence. Another source of discontent among youth is the despoilage of their rightful inheritance—the good earth and its atmosphere. On every hand they see the evidence and know about the serious threats to the future of our planet and its population through pollution of the air, the water, and the soil, the wastage and unsound use of our natural resources, the exploitation of our natural wealth, the gross unconcern about the destruction or alteration of natural beauty and resources for recreation, and now, the threat that outer space and the moon could become way stations for waging war on other nations.

Irrelevant or inadequate curriculum and instructional programs. A basic cause of student unrest, rather than a mere source of irritation that provides occasion for protest, is an inadequate, sometimes inappropriate and irrelevant curriculum and boring or unchallenging teaching processes. Youth of the late 1960s and the 1970s are generally agreed to be the most knowledgeable, the best educated, the most sophisticated, the most worldly, the most self-reliant and self-confident, the most demanding, the most

self-assertive and aggressive generation this nation has ever known. Moreover, they are more numerous than in recent decades.

It is little surprise, then, to the thoughtful adult, to find that this generation of youth is not going to accept meekly and unquestionably an instructional program in either school or college that leaves them bored, is needlessly and senselessly repetitious, often irrelevant to any goals or plans they envision for themselves or, more seriously, fails miserably to deal with the realities of life as it is now lived and as youth anticipates it will be lived when they become the adult society. Moreover, they resent the boring, childish methods of instruction often used in secondary schools, the endless emphasis on memorization, the acquisition of isolated facts that have little meaning or significance in and of themselves, the senseless assignments of busy work, the disinterested manner of the teacher himself and his obvious lack of enthusiasm for the subject, and the deadness of classroom instruction.

Eye-opening but revealing accounts of what activists protest in the high schools of recent years are two books containing articles from underground newspapers and other types of materials from outraged high school students.²⁷ One of the most significant of these statements (included in the Divoky paperback) is a study report prepared by a small number of students in the high schools of Montgomery County, Maryland, issued under the title "Wanted: A Humane Education." It contains not only a list of things the students protest strongly, but 15 recommendations on "What Needs To Be Done." High school teachers and administrators may well ponder carefully the writings of thoughtful students presented in these two books.

These active, capable, dynamic young people find little to challenge them in far too many classrooms today. They mechanically go through the routine until some more aggrieved youngster sets the spark that starts the protest, or collectively the more aggressive take matters in hand.²⁸

²⁷ D. Divoky, ed., *How Old Will You Be in 1984?* (New York: Avon Division, Discus Book, 1970); John Birmingham, ed., *Our Time is Now: Notes from the High School Underground* (New York: Praeger Publishers, 1970).

²⁸ The literature on the inadequacies of the secondary school and on student protest movements directed at the school's program is voluminous. Some suggested references include Richard Hart and Galen Saylor, eds., *Student Unrest Threat or Promise* (Washington, D.C. Association for Supervision and Curriculum Development, 1970); Leslie Hart, *The Classroom Disaster* (New York: Teachers College Press, 1969); Ronald and Beatrice Gross, eds., *Radical School Reform* (New York: Simon & Schuster, Inc., 1970); Kenneth Erickson and others, *Activism in the Secondary Schools: Analysis and Recommendations* (Eugene: Bureau of Educational Research, University of Oregon, 1969); "Student Dissent," Special Issue, *Phi Delta Kappan*, 40:1 (September 1968); The Fact-finding Committee, *Crisis at Columbia* (The Cox Report); Joseph J. Schwab, *College Curriculum and Student Protest* (Chicago: University of Chicago Press, 1969); Robert L. Ackerly, *The Reasonable Exercise of Authority* (Washington, D.C.: The National Association of Secondary School Principals).

The Individuality of Students

We introduced this chapter by pointing out that students, obviously, constitute one of the two basic factors in the educative process. All schooling must, by the very nature of the educational process, be individual in nature and character. It is the growth and development of each youth that is being guided and fostered. We may instruct in group (class) situations in the secondary school, but learning is a personal matter.

In planning a total program of secondary education for all youth in this country, we must consider the educational and developmental needs of about 25 million young people who comprise the age group for which the secondary school should and must accept responsibility. Much of the educational program must, of necessity, be planned for groups of students, and instruction is principally in class situations. The principal concern of all teachers, then, is how to carry on instruction in groups and yet serve as fully as possible the educational needs of each individual student.

In this chapter we have examined aspects of the problem, establishing the fact that at the present time almost 25 percent of our total youth population withdrew from the secondary school prior to completion of the planned program—they become dropouts. We also examined the situation of youth who suffer significant cultural, social, and economic deprivations necessitating special educational programs. We considered the matter of discontent, disenchantment, and alienation among young people today, again pointing out that the secondary schools were not properly serving the educational and developmental needs of many young people as they grow to maturity in our present type of society.

We conclude this study of youth by emphasizing that each student for whose education the secondary school is responsible is a unique individual, and his proper education is possible only if the school respects this individuality. The traits and characteristics important in the process of schooling are numerous indeed; human variability among these traits is so extensive as to be almost unfathomable. Yet we must, if we are to be true to our profession, seek as best we can to develop each person in terms of his own capabilities and potentialities. We must be equally concerned about the educational and developmental needs of "disadvantaged" youth, as that term was used in this chapter, the militant, frustrated, disillusioned youth, as we described him, the potential dropout, the academically talented person who relishes abstract thought, the creative adolescent who has unusual talents in the arts, the youth who demonstrates ability to organize and lead a group, a student who enjoys and is adept at

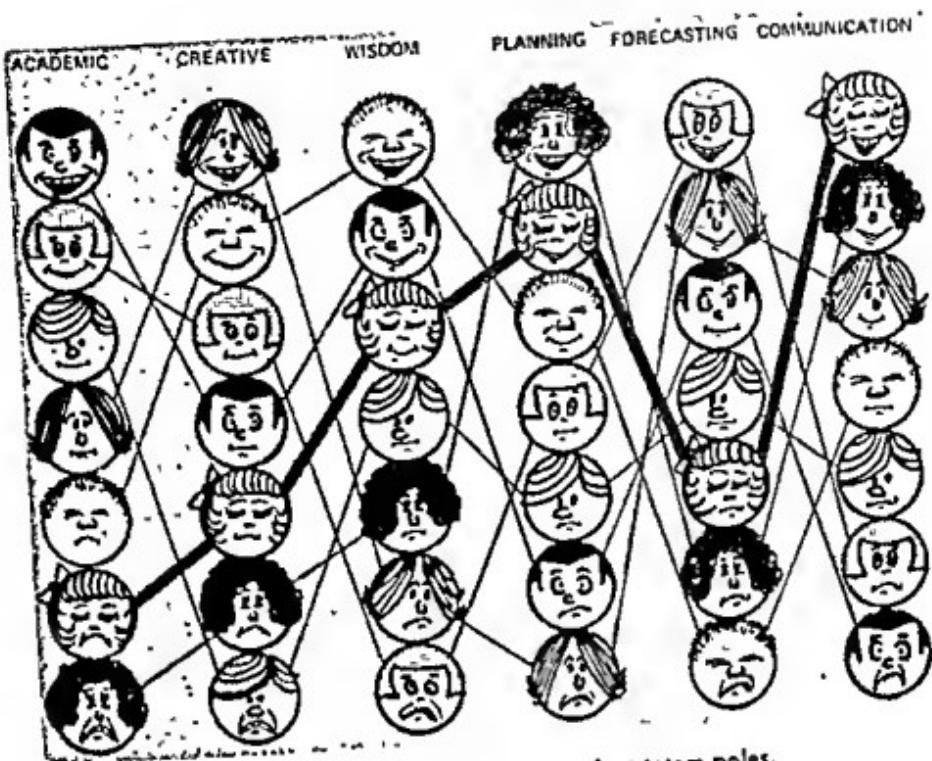


Figure 5. Taylor's multiple talent totem poles.

problem-solving or setting up a research project, a youth who can express himself effectively and interestingly in communicating ideas and knowledge, and indeed, of all youth, identifying their talents and potentialities adequately for planning purposes.

Dr. Calvin Taylor, Professor of Psychology at the University of Utah, has cleverly and adroitly written on the concept of multiple talents and has presented the essence of his point of view in a cartoon, "The Multiple Talent Totem Poles." He insists that "nearly all students are talented; that is, can be above average in at least one of the many important intellectual talents we can now measure."²⁹ In the cartoon, he has selected only a few talents, "... based upon world-of-work needs, ..." to illustrate his concepts of talent development. Obviously the number of talents that could and should be identified for instructional purposes are many.

One of the most important responsibilities of teachers is to study in great detail the characteristics not only of the young people enrolled in school but of the youth of secondary-school age in the community who

²⁹ Calvin W. Taylor, "Be Talent Developers as Well as Knowledge Dispensers," *Today's Education*, 57:67-69 (December 1968).

are not enrolled in school and did not complete a full high school program. Adequate and proper planning for the education of youth cannot take place unless teachers have the most complete set of information feasible to obtain about them. We have suggested in this chapter only a few types of data needed; your teacher-education courses will assist you in carrying out this responsibility. Throughout much of this book, we discuss plans and methods for individualizing instruction. Much progress has been made in the schools in recent years, but much remains to be done.

Additional Suggestions for Further Study

1. Erikson, Erik H., *Identity: Youth and Crisis*. W. W. Norton & Company, 1968. One of the foremost psychoanalysts and developmental psychologists discusses in great detail the problems of identity and the nature of the identity crisis in youth. This is a basic work in understanding a central problem of adolescent development and the role of the adult generation in contributing to the identification process and to the resulting crisis.
2. Gagné, Robert M., ed., *Learning and Individual Differences*. Columbus, Ohio: Charles E. Merrill Books, Inc., 1967. An extensive and scholarly set of papers on various types of differences among students, and implications of these variabilities for learning and teaching.
3. Goldstein, Bernard. *Low Income Youth in Urban Areas: A Critical Review of the Literature*. New York: Holt, Rinehart and Winston, Inc., 1967. An excellent analysis of research studies on the characteristics of ghetto youth. Includes the literature on the family, education, work, leisure activities, and similar topics. An extended annotated bibliography provides additional sources of information.
4. Hammer, Emanuel, ed., *Antiachievement: Perspectives on School Dropouts*. Los Angeles: Western Psychological Services, 1970. Ten contributors present original material on characteristics and motivations of dropouts. A dropout himself writes one of the chapters and views of attendance and parole officers are also included.
5. Hunt, J. McVicker, *The Challenge of Incompetence and Poverty*. Urbana: University of Illinois Press, 1969. One of the best sources of literature on the relationship of poverty and incompetence, concludes with two outstanding chapters on the consequences of poverty and other aspects of disadvantageousness, and presents a strong plea for programs that will overcome these consequences, thus ending the vicious circle of poverty-incompetence-continued poverty and incompetence in the next generation; contends that competency is not fixed at birth, but is highly subject to development.
6. Keniston, Kenneth, *Young Radicals: Notes on Committed Youth*. New York: Harcourt, Brace & World, Inc., 1968. Although the author bases his study on only 14 young "radicals" who were engaged in political action, he makes shrewd observations on youth and rejects a number of the easy, "pat" generalizations about militant young people.
7. Langton, Stuart, "Demythologizing the Student Revolt," and Richard A. Grotton, "Militant Student Activism in the High Schools: Analysis and Recommendations," *Phi Delta Kappan* 51:540-549 (June 1970). Two excellent articles that analyze the nature and causes of student revolt.
8. Lipset, Seymour Martin, and Philip G. Altbach, *Students in Revolt*. Boston: Houghton Mifflin Company, 1969. A series of papers on various aspects of student militancy. Critical comment on the student movement and much of it holds a view contrary to works that are sympathetic to student unrest.
9. Sampson, Edward E., Harold A. Korn and Associates, *Student Activism*

- and Protest.* San Francisco: Jossey-Bass, 1970. Presents research evidence and considers research methodology for studying activism. The data and the analyses of the authors are most helpful. Highly recommended for educators who want a better understanding of student activism.
10. Silberman, Charles E. *Crisis in the Classroom.* New York: Random House, 1970. A strident report on a 3-year study of the practices and foibles of American schools. Reveals many things that certainly would "turn kids off."
 11. "Welfare: Time for Reform," Special feature, *Saturday Review*, 53, No. 21, pp. 19-32 (May 23, 1970). Daniel P. Moynihan, Counselor to President Nixon on Urban Affairs and others present strong cases for the reform of public welfare. The existing system has in their opinion, broken down and drastic changes must be made.

CHAPTER 4

Defining the Purposes of the High School

When the people of a nation establish and operate a system of secondary schools they have certain goals in mind—some ends to be sought through this agency of education. The ends being sought may be poorly defined in the minds of many of the citizens, may be broad, diffuse, and global in nature, even a subject of controversy, or, on the other hand, may be clearly formulated, narrowly defined, specific and overt in nature, with attainment readily identifiable.

Similarly, the persons who are selected by the social group to establish the schools, formulate the programs, and teach the children will also have some ends in view. These administrators and teachers, too, may have only a diffuse, broad, global, ill-defined conception of the outcomes to be sought or, may envision clearly, comprehensively, and overtly the outcomes which they intend the pupils to achieve. In this chapter we will consider the nature and character of educational goals, suggest sources for determining and defining appropriate and proper objectives for the school, list some widely acclaimed sets of aims and purposes, and propose a basis for defining the ends to be sought.

The Nature and Use of Goals in Planning and Teaching

Because many terms are used, often interchangeably, in stating and discussing the outcomes being sought through the process of schooling, it is desirable to establish some definitions.

Definition of Terms

The term used to designate the special and proper activity of the school is *functions*. Functions are the general duties, responsibilities, and kinds of action that belong to the school and are appropriate aspects of

its activities and program. The term designates the scope of the program and those things that are valid aspects of its work as a social institution.

The terms *aims*, *goals*, *purposes*, and *objectives* are used interchangeably and synonymously when referring to the outcomes the school intends its pupils to attain. Some slight differences in meaning and in the nature of the stated end may be conveyed by each of these terms, but in ordinary usage little if any distinction exists among them. *Goals* of education, or of the school, or of specific aspects of the program conveys the idea of broad, basic ends that are stated globally and generically, and designates outcomes that would be gross and broad in character rather than specific behavioral acts. *Aims* is also used in a global, broad sense to state the outcomes being sought by the school, but suggests a more overt and behavioral form than is usually associated with goals. However, in educational writings there is seldom any clear distinction between the use of these two terms. Statements of *purposes* of the school or of any aspects of its program are more specific in nature and indicate openly and directly the desired ends. Purposes are somewhat more specific and more often stated in terms of overt behavior or behavioral changes than are statements of either goals or aims.

Objectives are specific, overt, direct statements of the behavioral outcomes being sought by the school either in totality or in any aspect of its program. They carry the connotation of specificity, identifiability, and measurability. They are the basic ingredients of an educational program and, hence, direct the workaday activities of teachers and students. At the present time, the term "objectives" is the one generally used by educators themselves to designate the outcomes they intend pupils to achieve as the result of the process of schooling.

Robert F. Mager, who has been very helpful through his writings in recent years in helping educators formulate objectives more clearly and definitively, defines an objective as "an intent communicated by a statement describing a proposed change in a learner—a statement of what the learner is to be like when he has successfully completed a learning experience. It is a description of a pattern of behavior (performance) we want the learner to be able to demonstrate."¹

Desired outcomes is actually the most meaningful of all of the terms used to designate ends being sought, for it clearly connotes that the purpose of the activities of the school is to enable pupils to achieve specific results that have been postulated as the purposes of the program of schooling. However, this term has not had the acceptance in educational circles of the other four terms, particularly the term objectives, in recent educational writings. Desired outcomes and objectives have identical

¹ Robert F. Mager, *Preparing Instructional Objectives* (Palo Alto, Calif.: Fearon Publishers, 1962), p. 3.

connotations when applied to the process of schooling. They both mean the changes which are expected to be accomplished by students as a result of their schooling.

Philip H. Phenix² adds to the clarification of these terms by suggesting that we consider a hierarchy of aims in which there are ultimate aims, mediate aims, and immediate aims. Immediate aims would designate those desired outcomes that characterize the specific, day-by-day activities of the classroom and of the school as a totality. In this sense, the immediate aims would be comparable to objectives in their specificity, overtness, and definitiveness. These aims would be those the teacher sets up for a lesson, a specific assignment, a class activity, or a unit of work in a course.

Mediate aims would be of a higher level and would constitute those aims to which the immediate aims contribute in an ongoing process of schooling. They would be broader in scope, more inclusive, and more general in character. Ultimate aims, according to Phenix, would be those which are final and to which all prior aims contribute in their attainment. There would be no successor aims in the hierarchy for the ultimate aims—they would be the final end of the process of schooling.

Whether one wants to accept Phenix's distinction among sets of aims, it is clear, as will become evident later in this chapter, that statements of purposes of education do differ greatly in their degree of generality, inclusiveness, and definitiveness. Statements of purposes will vary from a specific act of performance that is clearly and overtly identifiable by anyone to the kinds of very broad general statements that characterize the writings of such philosophers as John Dewey, Herbert Spencer, and Alfred North Whitehead.³

Bases for Formulating and Validating Goals

Because secondary schooling is an extensive undertaking, requiring great expenditures of money, time, and effort on the part of many people, demanding major commitments of both time and effort by students, the functions, aims, and objectives of the school must be valid, appropriate, significant, and essential. The high school should always seek to provide its students with learning opportunities and experiences that hold the promise of being of maximum value in the education of adolescents and young adults. The school should choose from among all the possible

² Philip H. Phenix, *Philosophy of Education* (New York: Holt, Rinehart and Winston, Inc., 1958), pp. 552-559.

³ John Dewey, *Democracy and Education* (New York: The Macmillan Company, 1916), Chap. 8.; Herbert Spencer, *Education: Intellectual, Moral, and Physical* (New York: Appleton-Century-Crofts, Inc., 1860); Alfred North Whitehead, *The Aims of Education and Other Essays* (New York: The Macmillan Company, 1929).

functions it might serve and the aims and objectives it might seek to attain only those that will contribute maximally to the development of the young.

Making choices among functions, aims, and objectives and among the learning opportunities provided for the realization of these ends are primary and fundamental responsibilities of administrators and teachers. This is an awesome responsibility. What, then, constitute adequate and appropriate bases for defining the functions, aims, and objectives of the school and, subsequently, for validating not only these statements but also the kinds of programs and the curriculum provided youth?

As was pointed out previously, John Dewey provided the answer to this basic question: "The fundamental factors in the educative process are an immature, undeveloped being; and certain social aims, meanings, values incarnate in the matured experience of the adult. The educative process is the due interaction of these forces."⁴

In complete agreement with this point of view, we believe that the two basic factors to be considered in the derivation and definition of functions, aims, and objectives of the school are the pupils themselves and the culture of the social group that establishes and controls the schools. It is from these data sources that we should derive the purposes to be served by the school and, in turn, determine the educational program to be offered.

Figure 6 illustrates the process of educational planning and indicates the order of priority in the development of the educational program. We start with the two primary factors to be considered: the pupils, and the culture of the social group. From each of these sources planners must extract the significant data and formulate the generalizations and concepts that constitute essential bases for planning. Rationally, the formulation of the statement of functions of the school, the aims of education, and the objectives of the various aspects of its program should be determined on the basis of the insights obtained from the analyses of these two basic factors in the educative process.

But this is a judgmental process and represents choices among many possibilities. These decisions constitute a philosophy of education, a moral choice among values. A system of values, encompassing a conception of the purposes and ends of schooling, is a highly personal thing. Each individual decides for himself what constitutes his values, his conception of the good life for man, and, hence, what he feels the functions and purposes of his schools should be. The program of schooling is the product of such give and take discussions among those who make curriculum decisions.

No computer nor mechanical process can be used to arrive at a

⁴ John Dewey, *The Child and the Curriculum* (Chicago: The University of Chicago Press, 1902), p. 7.

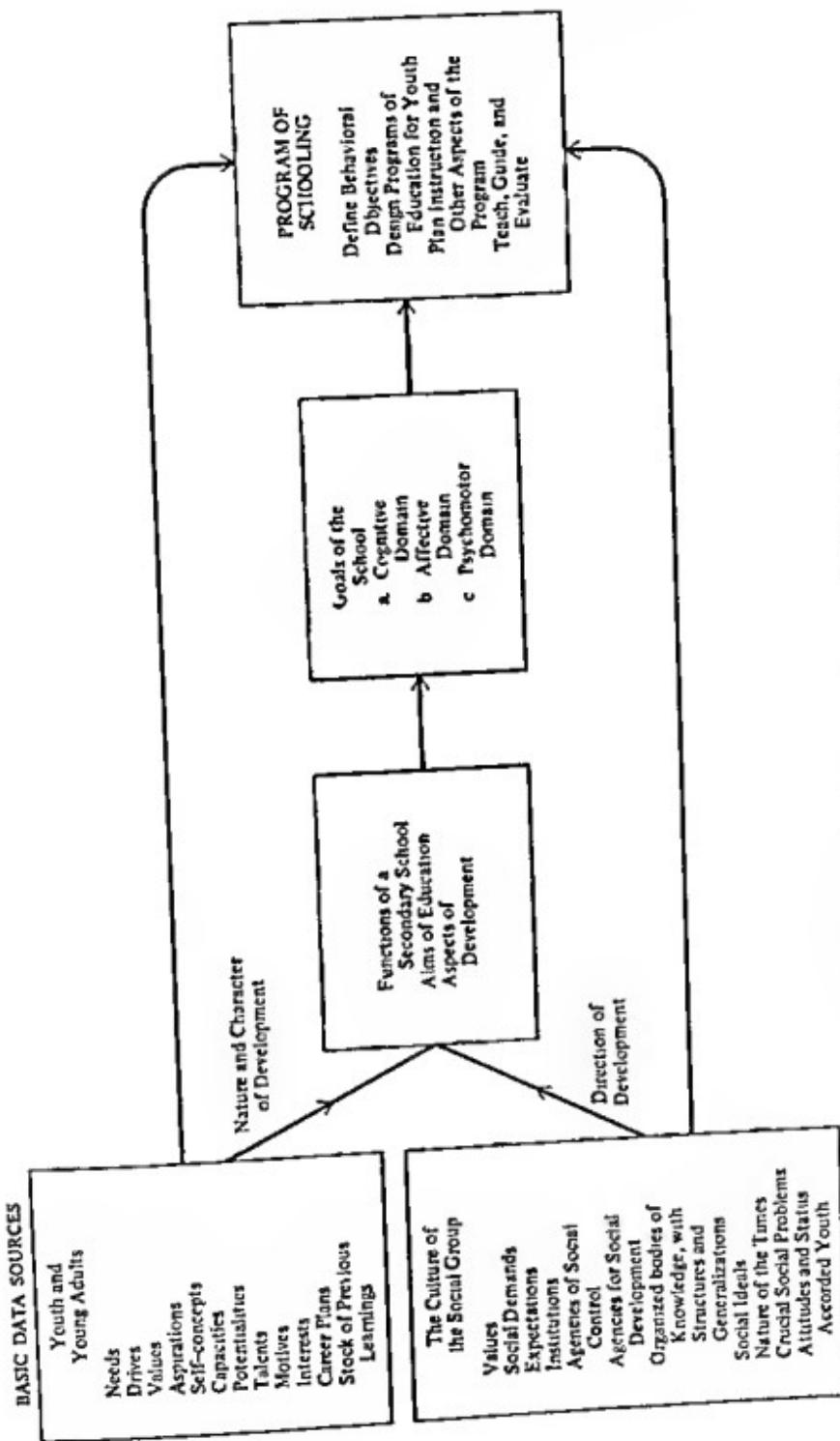


Figure 6. The formulation and use of functions, aims, goals, and objectives for the secondary school.

value judgment; mechanical aids can be used to bring together data, determine alternatives, and even provide estimations of the outcomes if a particular course of action is followed, but the actual choice of values and determination of goals is a personal decision that must be made by the individual himself. How each teacher uses the data available from the students and the culture is for him to decide; there is no prescription to determine what factors are to be considered, what relative weights are to be given to each factor, and what a set of factors means in the determination of ends to be sought in schooling. There are, of course, the recommendations, advice, and points of view of other educators and philosophers, many of great renown, and their statements of the purposes of education, but each curriculum planner and teacher must, nevertheless, make his own decisions on the ends to be sought. His views will be subject to review and close scrutiny by the members of the social group, and if his judgment is bad or not acceptable to the citizens who control the schools, he faces censure or removal from his position of trust.

Throughout the history of education those who establish, control, and administer schools and those who instruct students have viewed the significance and importance of these factors in many different ways. Until the early part of this century, the school generally gave greater weight to the nature and character of the adult society in planning its program than it did to the nature and characteristics of the child. But largely as a result of John Dewey's writings in the first two decades of this century and the work of certain other influential philosophers and educational theorists, much greater attention has been given in recent years to the child himself as a basic factor in the educational process. In the 1920s there emerged what is generally called the child-centered school, a type of school in which major if not almost exclusive concern was devoted to the needs, interests, and development of the individual child.

Dewey states this dilemma:

We get the case of the child vs. the curriculum; of the individual nature vs. social culture. . . . From these elements of conflict grow up different educational sects. One school fixes its attention upon the importance of the subject-matter of the curriculum as compared with the contents of the child's own experience. . . . [The one sect says] ignore and minimize the child's individual peculiarities, whims, and experiences. They are what we need to get away from. They are to be obscured or eliminated. . . .

Not so, says the other sect. The child is the starting-point, the center, and the end. His development, his growth, is the ideal. It alone furnishes the standard. To the growth of the child all studies are subservient, they are instruments valued as they serve the needs of growth. Personality, character, is more than subject-matter.⁵

⁵ Dewey, pp. 8-13.

But, as Dewey then pointed out, the process of education is an interactive one between the learner and the social group. In formulating the purposes and goals of education and in planning programs to achieve these ends, it is never a matter of youth versus culture, but youth growing and developing in a social group. Obviously, youth sets the nature and character of growth and development but society sets the direction and postulates the character of the good life that should be sought through the interactive process of education.

In Chapters 2 and 3 we presented some of the kinds of data an educational planner needs in the determination of the aims of the school. Obviously, neither chapter included much of the information needed; we selected only some types of data and information that are especially important in planning for the high school of the future and that illustrate the kinds of studies teachers should make as a basis for decision-making about schooling.

Using Statements of Aims and Objectives

The definition of functions, aims, and objectives for a secondary school is the starting point in the whole process of planning a program of schooling. It is fundamental to the determination of:

1. The kind of school system that should be established by the social group and the structural organization for the administration and organization of the system
2. The total program of education to be provided for young people
3. The outcomes to be sought in each part and each aspect of the program
4. The administrative organization, practices, and procedures that will enable the school to develop a program of education that best enables pupils to achieve the desired ends
5. The kinds of facilities, instructional materials, equipment, and institutional arrangements that will best contribute to instruction
6. The methods to be used in evaluating the success of the school and in making a judgment on the extent to which it has achieved its stated purposes

Because our system of schooling has a 300-year history with methods of control, administrative structures, organization, and the school program itself already determined and being followed in practice, the responsibility of the public and of educators is primarily one of judging the merits of an existing system. A definition of the ultimate aims of education and further delineation of the intermediate aims of the school should serve primarily as the bases for a continuing and extensive evaluation of our school program. Does the secondary school as it now exists provide all of the young people of the nation with adequate, significant, and comprehensive opportunities to achieve these ultimate and intermediate aims of education? Should changes be made in the basic pattern and structure of schools?

In recent years, major efforts have been made in many states and cities to restructure the school system so as to bring together in one building youth of many different traits, characteristics, ethnic backgrounds, social and cultural status, and other factors that are significantly related to the proper and adequate human development. Similarly, the lay public and educators alike are now examining in a more thoroughgoing and critical manner than ever before many of the institutional structures, organizational patterns, and instructional programs in our schools to see if they contribute maximally to the attainment of the basic goals of education by all students.

The extensive lists of objectives which are established by teachers and other professional educators for specific aspects of the curriculum and program of the school provide the basis for evaluating the quality, character, and comprehensiveness of the learning opportunities provided. Thus, behavioral objectives have importance not only as a basis for planning the curriculum and program and the detailed day-by-day classwork and activities, but constitute the essential ingredients for evaluating the effectiveness of the school.

The Use of a System in Educational Planning

In recent years, the use of a systems model in planning and management has had widespread acceptance among business organizations and governmental agencies. Authorities now strongly recommend that educators use a systems approach in planning and carrying out a program for schooling the young. In light of the increasing use of such a model in educational circles, it seems desirable to familiarize teachers with this strategy and explain its use by school staffs.

By a system is meant simply identifying and bringing into proper relationship the interdependent elements or subparts that must function together as an organized whole to attain the ends or goals for which that system is established.

The systems approach to educational planning and administration means the use of the most rational processes possible in making decisions about the program or whatever aspect of the program is the subject of the systems analysis. The use of the term "systems" implies, of course, that the planner is concerned with the total process and seeks to draw on the pertinent and significant data necessary for wise decisions. He fully analyzes the interrelationships of various sets of data and other aspects of essential factors, marshals this information together in formulating alternative possibilities for the achievement of the ends sought, and then makes a basic decision as to which alternative or alternatives should be followed in the carrying-out phase. In short, the systems approach is a method of arriving at decisions in which purposes and ends sought are

clearly defined, pertinent factors for achieving these ends are taken into account, the proper interrelationship of these factors in planning and in carrying out the plans is established, and the kinds of data necessary for designing the best system possible are assembled; thus the steps and activities necessary to achieve the end sought become evident.

One of the principal advantages of this approach to planning is that proper use of a systems model forces planners to think through carefully the steps in the flow of activities or procedures that must be followed from the beginning of the process to the end in order to achieve the outcomes being sought.

One of the elements usually missing in the models of systems for educational planning is the bases or factors to be considered in the definition of the aims of the system itself. Systems advocates usually start blandly with systems objectives as the initial point of planning. But the greatest responsibility of any educator, as we have pointed out earlier, is to formulate valid, significant, and acceptable aims and objectives for the schools. In our opinion, the basis for determining such purposes and objectives is a careful and thoroughgoing analysis of the two fundamental factors in the educative process itself—pupils and the social culture—and relatedly, but secondarily in importance, an analysis of the nature and character of the learning process and of the nature, availability, and organization of knowledge for use in the schools.

Hence, in our proposed model of a systems approach to educational planning (Figure 7) we have shown that an analysis of these factors is basic to the formulation of the aims of education. Only then may the plan for schooling be determined and the school as a subsystem of the total process be designed, organized, staffed, and equipped.

Educators are then ready to plan the educational program for specific schools, assigning from among all the functions, aims, objectives of education appropriate ones to each particular school. The school accordingly can carry out its assigned functions and purposes through a planned program of education.

As the final step in the system, there is a constant and continuing evaluation of the appropriateness of the organizational plan for schooling, of the effectiveness of each segment of the system in achieving its assigned functions, and, finally, an evaluation of the objectives, functions, and purposes that were postulated originally for the school system. These evaluations constitute a feedback that would result in any needed modification all along the line in the systems model, beginning with the formulation of aims and objectives of education themselves.

The systems model is obviously no mystique for planning an educational program. It is simply a procedure by which educators can be more systematic and give a more rational consideration to the factors that

shape and influence the program of education, be more skillful and insightful in formulating alternative plans, select most intelligently the alternatives that seem to offer the most promise for achieving the objectives postulated for the system, and more carefully evaluate results and, through a feedback process, modify the structure itself if needed.

But, as stated earlier, educational planning is still a matter of judgment; the value of a systems approach in decision making is well stated by a leader in the business world:

Ultimately all policies are made . . . on the basis of judgments. There is no other way, and there never will be. The question is whether those judgments have to be made in the fog of inadequate and inaccurate data, unclear and undefined issues, and a welter of conflicting personal opinions, or whether they can be made on the basis of adequate, reliable information, relevant experience, and clearly drawn issues. In the end, analysis is but an aid to judgment. . . . Judgment is supreme.⁶

The Functions of High Schools in American Democracy

Now that we have considered in some detail the necessity of determining functions, aims, and objectives of education and the basic factors to be considered in a definition of desired ends, let us examine statements of these purposes.

A statement of the functions of the high school system of the United States defines the responsibilities of the schools—the overall duties that society has assigned to the schools and the broad social obligations with which they are charged. Few educational agencies or organizations have actually spelled out in detail what the American people consider to be the functions of the school, for functions often parallel and, in fact, are simply another way of stating goals, aims, or objectives for the school. Hence, educators usually concern themselves directly with the goals or purposes of the schools, ignoring functions. But we believe that in any systematic approach to planning an educational program it is essential first to define the functions assigned the school by society. These responsibilities set the parameters within which the goals, purposes, and objectives of the schools should be formulated.

The most significant and insightful statement of the functions of schools in America was promulgated by the Educational Policies Commission of the National Education Association.⁷ The Commission had the

⁶ Alain C. Enthoven, quoted in *Business Week*, No. 1859 (November 13, 1963), p. 189.

⁷ Educational Policies Commission, National Education Association, *The Unique Function of Education in American Democracy* (Washington, D.C.: The Association, 1937).

assistance of the eminent historian, Charles A. Beard, in the preparation of this statement.

The Commission, after reviewing the functions assigned schools historically in the sounding and development of our nation, concludes that:

The primary business of education, in effecting the promises of American democracy, is to guard, cherish, advance, and make available in the life of coming generations the funded and growing wisdom, knowledge, and aspirations of the race. This involves the dissemination of knowledge, the liberation of minds, the development of skills, the promotion of free inquiries, the encouragement of the creative or inventive spirit, and the establishment of wholesome attitudes toward order and change—all useful in the good life for each person, in the practical arts, and in the maintenance and improvement of American society, as our society in the world of nations.⁸

But the Commission emphatically points out that the dissemination of knowledge is not the sole function of the schools. "The nature of the knowledge to be disseminated is qualified by the condition, 'useful in the good life and in the maintenance and improvement of American society.'" But what is useful is an ethical question, and hence, "ethics is, therefore, not a side issue with education as here conceived, but is a central concern—a concern that gives direction to the spread of knowledge."⁹

The school, according to the Commission, has a third function in our society: "It is committed to the maintenance and improvement of American Society now constituted and unfolding, and to the use of knowledge and the practical arts in the manner conducive to these ends."¹⁰

In a profound summary of the functions of the school, the Commission echoes what statesmen and citizens generally have said from the beginnings of our nation:

In any realistic definition of education for the United States, therefore, must appear the whole philosophy and practice of democracy. Education cherishes and inculcates its moral values, disseminates knowledge necessary to its functioning, spreads information relevant to its institutions and economy, keeps alive the creative and sustaining spirit without which the letter is dead.¹¹

Other groups and scholars have also written insightfully on the functions of the school in our society. Examining the historic traditions of the United States, the social conditions today within which the school exists,

⁸ Educational Policies Commission, pp. 77-78.

⁹ Educational Policies Commission, pp. 80-81.

¹⁰ Educational Policies Commission, p. 85.

¹¹ Educational Policies Commission, p. 89.

and the nature of our democratic society, we believe the functions of the secondary schools of this nation to be:

1. *Universal education.* To provide an appropriate education for all youth of the nation.
2. *Development of individual potentialities.* To enable each adolescent to determine what comprises his personal potentialities for growth and development and his capabilities and talents, and to provide a program of education that will enable him to develop these capabilities to the fullest extent possible.
3. *Transmission of the cultural heritage.* To teach pupils those elements of the cultural heritage necessary and desirable for personal development and group living and to assist pupils in systematizing and organizing knowledge and formulating concepts and generalizations so that knowledge may be used effectively.
4. *Development of a socially acceptable system of values.* To assist each student in the formulation of value patterns and modes of behavior that are consistent with the moral ideals and approved behavioral patterns of the social group.
5. *Use of intelligence in decision making and action.* To assist and encourage students to make decisions and decide courses of action on the basis of rationality and intelligent choices.
6. *Provide the basis for continual personal development.* To develop in students the desire and the ability to continue to gain knowledge, discover new knowledge, and to act on the basis of new conditions and factors inherent in changed conditions.
7. *Enhancement of the life of the social group.* To enable youth, through properly chosen educational activities and content, to contribute to the improvement of the society and its realization of the good life for all citizens.
8. *Preparation for adulthood.* To prepare youth for adulthood in whatever ways seem feasible and desirable.

As the first essential step in planning a program of secondary education for the nation as a whole, for a state, and for a local school district, we believe that a definition of the primary functions the schools should serve, such as the list above, must be formulated. A statement of functions provides a basis for defining the aims of the school itself and the objectives of each aspect of the program.

The Aims and Objectives of Secondary Schools

Having now stated the functions of the secondary school, we are in a position to discuss aims and objectives. As stated earlier, we choose to use the term "aims of education," or "aims of the secondary school," as a statement of the broad fundamental ends being sought through the educational program. We will consider, first, a global view of education or, in Phenix's language, the ultimate aim of education. But we will also

consider the aims of education at a second level of specificity, namely the areas of life activities in which the school should contribute to the student's development. Finally we will discuss the goals and behavioral outcomes which the school seeks to help students achieve.

The Fundamental Aims of Secondary Education

Obviously, whenever a school or system of schools has been established, some ends in view—the aims—have been envisioned by those who established and operate the school. For example, when the General Court of the Massachusetts Bay Colony in 1647 passed the "Old Deluder Satan" Law, it stated that a system of grammar schools should be established that would "instruct youth so far as they shall be fitted for the university." A century later when Benjamin Franklin formulated his plan for the establishment of an Academy for the education of youth, he proposed that "it would be well if they could be taught *every thing* that is useful, and *every thing* that is ornamental; but Art is long, and their Time is short. It is therefore propos'd that they learn those Things that are likely to be *most useful* and *most ornamental*. Regard being had to the several Professions for which they are intended." Herbert Spencer, the eminent English philosopher of the nineteenth century, wrote in 1860 that "to prepare us for complete living is the function which education has to discharge."

John Dewey, in his basic statement on education more than a half century ago insisted that "the educational process has no end beyond itself; it is its own end. . . . since in reality there is nothing to which growth is relative save more growth, there is nothing to which education is subordinate save more education . . . the purpose of school education is to insure the continuation of education by organizing the powers that insure growth."

The Educational Policies Commission, an arm of the National Education Association, said in 1938 that "the general end of education in America at the present time is the fullest possible development of the individual within the framework of our present industrialized society."

All teachers, administrators, and professional workers in the schools, all parents, and all citizens of the nation should formulate for themselves what they consider to be the fundamental and basic aim of the secondary schools. The schools constitute one of the most important and influential social institutions of this nation, and it behooves everyone, since every person is in one way or another affected by the schools, to consider the ultimate end which they should serve. It is to be hoped that there will be widespread consensus on the end to be served, but it still is the privilege, in fact, the obligation of every citizen to formulate his own definition.

We believe that in America in the latter part of the twentieth century: *The Ultimate Aim of the Secondary School in American Democracy*

racy is the Maximally Feasible Development in Socially Approved Directions of the Potentialities, Capabilities, and Talents of Each Youth and Young Adult.

Aspects of Development To Be Fostered by the Secondary School

The ultimate aim of secondary education must, by its very nature, be broad, inclusive, and global in scope. It states for the educator the fundamental purpose of the school that constitutes the starting point for all planning and decision making about program. But, as Hollis L. Caswell, the eminent authority on curriculum, pointed out in a recent address:

. . . goals of education as stated by philosophers are general in nature. They suggest the direction education should take but leave a great gap which must be filled if teachers and students are to have meaningful guidance for day-by-day activities. The fundamental problem facing curriculum specialists is to establish a consistent relationship between general goals, on the one hand, and specific objectives that guide teaching, on the other.¹²

In translating general goals into specific objectives, an intermediate step is desirable in which the categories of growth and development or the aspects of human experience with which the school should be concerned are stated. Several commissions and groups have provided analyses of this type that have had widespread acceptance and use in educational planning.

Herbert Spencer, continuing his plea that the function of education is "to prepare us for complete living," listed five broad types of human activities with which the school should be concerned:

1. Those activities which directly minister to self-preservation
2. Those activities which, by securing the necessities of life, indirectly minister to self-preservation
3. Those activities which have for their end the rearing and disciplining of offspring
4. Those activities which are involved in the maintenance of proper social and political relations
5. Those miscellaneous activities which make up the leisure part of life devoted to the gratification of tastes and feeling¹³

¹² Hollis L. Caswell, "Emergence of the Curriculum as a Field of Professional Work and Study," *Precedents and Promise in the Curriculum Field*, Helen F. Robison, ed. (New York: Teachers College Press, 1966), p. 5.

¹³ Herbert Spencer, *Education: Intellectual, Moral, and Physical* (New York: Appleton-Century-Crofts, Inc., 1860), pp. 13-14.

Extending this concept, The Commission on the Reorganization of Secondary Education, more than half a century later (1918), published a report, *Cardinal Principles of Secondary Education*, that undoubtedly is the most significant and influential statement of the role and purposes of secondary education that has been made in the educational history of our nation.

First the Commission stated its conception of the ultimate aim of education:

Consequently, education in a democracy, both within and without the school, should develop in each individual the knowledge, interests, ideals, habits, and powers whereby he will find his place and use that place to shape both himself and society toward ever nobler ends.¹⁴

Then the Commission, using the approach recommended here, held that "in order to determine the main objectives that should guide education in a democracy it is necessary to analyze the activities of the individual." On the basis of such an analysis the Commission stated these to be the broad areas of human activities for which the secondary school should accept responsibility in the education of youth:

CARDINAL PRINCIPLES OF SECONDARY EDUCATION

1. Health

The secondary school should therefore provide health instruction, inculcate health habits, organize an effective program of physical activities, regard health needs in planning work and play, and cooperate with home and community in safeguarding and promoting health interests.

2. Command of fundamental processes

The facility that a child of 12 or 14 may acquire in the use of these tools is not sufficient for the needs of modern life.

3. Worthy home-membership

Worthy home-membership as an objective calls for the development of those qualities that make the individual a worthy member of a family, both contributing to and deriving benefit from that membership.

4. Vocation

Vocational education should equip the individual to secure a livelihood for himself and those dependent on him, to serve society well through his vocation, to maintain the right relationships toward his fellow workers and society, and, as far as possible, to find in that vocation his own best development.

5. Civic education

Civic education should develop in the individual those qualities whereby

¹⁴ Commission on the Reorganization of Secondary Education, *Cardinal Principles of Secondary Education*, Bulletin 1918, No. 35 (Washington, D.C.: Government Printing Office, 1918), p. 9.

he will act well his part as a member of neighborhood, town or city, state, and nation, and give him a basis for understanding international problems.

6. *Worthy use of leisure*

Education should equip the individual to secure from his leisure the recreation of body, mind, and spirit, and the enrichment and enlargement of his personality.

7. *Ethical character*

In a democratic society, ethical character becomes paramount among the objectives of the secondary school.¹⁵

The *Cardinal Principles of Secondary Education* was widely acclaimed and accepted by educators and citizens generally and has constituted the basic document on the purposes and nature of the secondary school for the present era. As Krug states in his detailed history of the preparation of the report and analysis of its contents, it is "one of the most important statements ever made about secondary education."¹⁶ It became the basic guide for the universalization of secondary education in this country, which rapidly took place in the ensuing years, as data in Chapter 3 have shown. This report recommended a program of secondary education that, in the opinion of the Commission, was designed to serve all American youth and to provide a schooling that would enable each individual to "find his place and use that place to shape both himself and society toward ever nobler ends."

But the 1970s are a new era, a new day in American secondary education; the times are significantly different than they were in 1918. Again educators and citizens must examine critically the aims and objectives of the high school and, if need be, formulate a new statement. In light of these goals, whether the traditional ones or new ones, they must design educational programs that will truly serve the educational needs of all youth.

Just such a review of the *Cardinal Principles* was made in 1944 by the Educational Policies Commission of the National Education Association. In preparing an extensive blueprint for the kinds of programs of secondary education that the nation should develop after World War II, the Commission approved, in essence, the 1918 report, but restated it in more usable form, and extended the list to include items that reflected a broader conception of secondary education. That list has been used extensively by schools in the ensuing years as a basis for educational planning and is presented here in full:

¹⁵ The Commission, pp. 11-15.

¹⁶ Edward A. Krug, *The Shaping of the American High School* (New York: Harper & Row, Publishers, 1964), p. 397.

IMPERATIVE EDUCATIONAL NEEDS OF YOUTH

1. All youth need to develop saleable skills and those understandings and attitudes that make the worker an intelligent and productive participant in economic life. To this end, most youth need supervised work experience as well as education in the skills and knowledge of their occupations.
2. All youth need to develop and maintain good health and physical fitness.
3. All youth need to understand the rights and duties of the citizen of a democratic society, and to be diligent and competent in the performance of their obligations as members of the community and citizens of the state and nation.
4. All youth need to understand the significance of the family for the individual and society and the conditions conducive to successful family life.
5. All youth need to know how to purchase and use goods and services intelligently, understanding both the values received by the consumer and the economic consequences of their acts.
6. All youth need to understand the methods of science, the influence of science on human life, and the main scientific facts concerning the nature of the world and of man.
7. All youth need opportunities to develop their capacities to appreciate beauty, in literature, art, music, and nature.
8. All youth need to be able to use their leisure time well and to budget it wisely; balancing activities that yield satisfactions to the individual with those that are socially useful.
9. All youth need to develop respect for other persons, to grow in their insight into ethical values and principles, and to be able to live and work cooperatively with others.
10. All youth need to grow in ability to think rationally, to express their thoughts clearly, and to read and listen, with understanding.¹⁷

Another example of the efforts of a group to establish the areas of development for which the high school should accept responsibility in the education of youth is the excellent report prepared by Will French and a group of educators associated with him. They have listed an extensive set of objectives for the general educational aspect of the secondary school program. In developing these goals the group first formulated a two-dimensional model as the basis for defining specific objectives. Figure 8 shows the plan and states the "three directions of behavioral growth which all youth must make as they develop toward maturity in four areas where they must attain competence if they are to carry on the common

¹⁷ Educational Policies Commission, National Education Association, *Education for All American Youth* (Washington, D.C.: The Association, 1944), pp. 225-226.

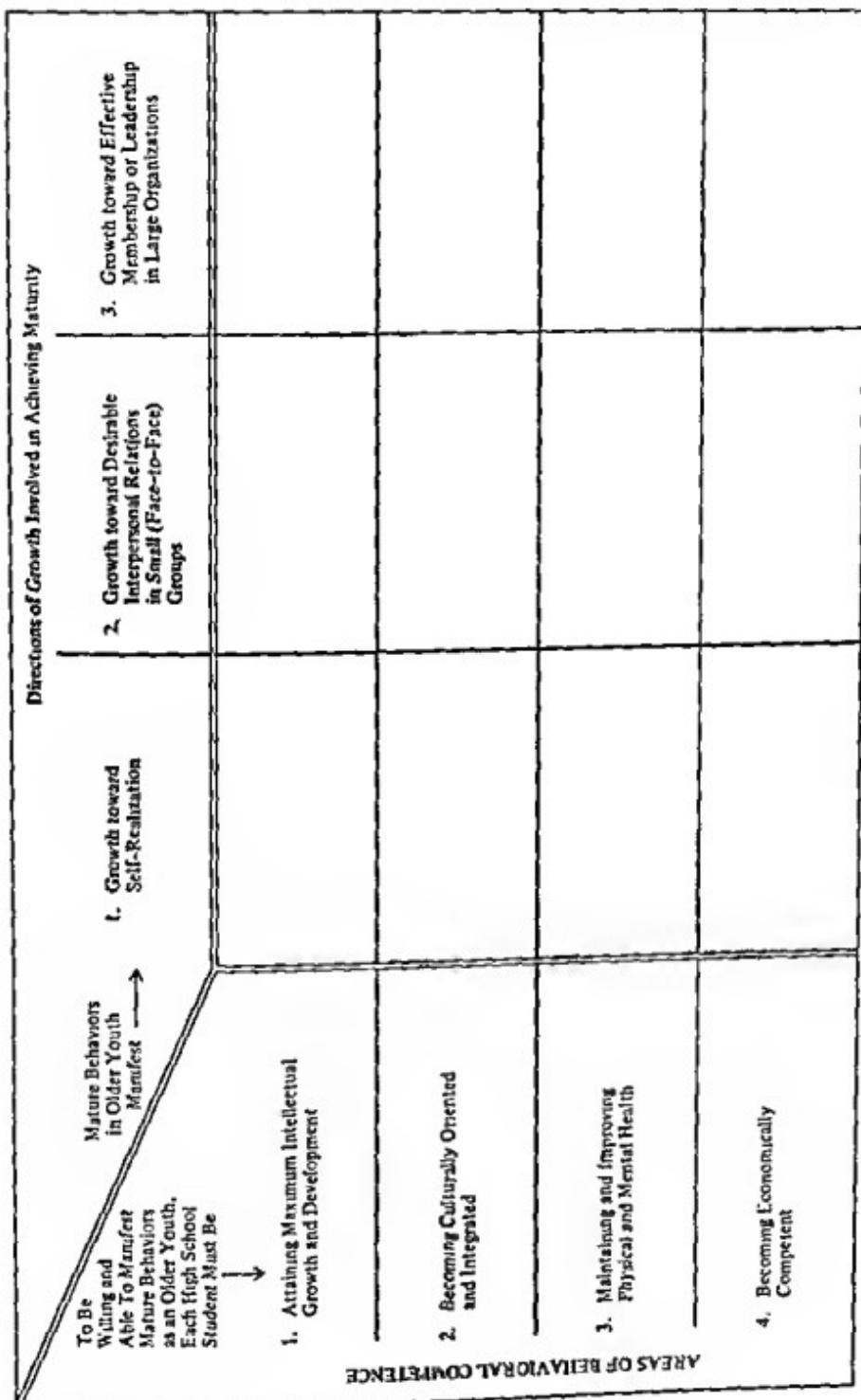


Figure 8. French's chart of the directions and areas of growth toward maturity.

activities of life in a manner satisfactory to themselves and acceptable to society."¹⁸

French and the group then developed lists of objectives for each of the twelve rectangles illustrated. This scheme resulted in an extensive set of objectives that provide a basis for planning and carrying out the general education functions of the high school. We regard this report as the best set of objectives that has yet been published for secondary schools, not only because of its comprehensiveness but because it set goals for the high school that square with what educators generally believe to be the purposes of secondary education. The authors of this text especially like them for they designate the kinds of school programs that would enable students to achieve at a high level the ultimate aim of education which we postulated for the schools.

In concluding this discussion of the second step desirable in the formulation of aims and objectives for the secondary school—the identification of the aspects of development for which the school should accept responsibility—the authors present their own concept of the areas of responsibility of the secondary school. These constitute, in our opinion, the categories for which goals and objectives should be formulated by the staff.

ASPECTS OF DEVELOPMENT FOR WHICH THE SECONDARY SCHOOL ACCEPTS RESPONSIBILITY

A. *Self-fulfillment*

1. Self-realization—development of talents, capabilities and potentialities
2. Personal behavior—development of individual and social behavior that is morally and socially desirable; rational action
3. Physical and mental health
4. Living the good life—social relationships, enjoyment of beauty and the things that ennoble life; ability to cope with conditions self-satisfyingly; intellectuality
5. Occupational competency
6. Life-long growth—interest in continuing intellectual growth and personal development

B. *Group relationships*

7. Social and citizenship responsibilities—fulfillment of roles in the social group; social responsibility
8. Family life
9. Necessities of life—procurement; consumership; use of personal resources; conservation of human and material resources

¹⁸ Will French and Associates, *Behavioral Goals of General Education in High School* (New York: Russell Sage Foundation, 1957), p. 85.

Designing the Program of Secondary Education

After the functions of the secondary school have been determined by the social group that establishes and controls the school and they have agreed explicitly or implicitly on the ultimate aim to be served by these schools, and educators, subject to approval by the members of the social group, have determined the areas of human development for which the school should accept responsibility, the total program of secondary education should be designed. For all of us now employed in the schools or who will soon enter employment, these things have all been done, and the schools are in operation. The professional responsibilities of the teacher become, first, those of determining the validity of the existing aims of the school and, if necessary, redefining them in light of existing conditions and the nature and character of the youth for whom the program is to be planned. Secondly, the teacher must evaluate the program of education being provided to ascertain its appropriateness for fulfilling these aims. If the program is deficient in any respect, it should be redesigned.

Much of the remainder of this book is devoted to matters of designing the program of secondary education, and to a discussion of the kinds of secondary schools we must have if proper ends are to be attained. Many factors must be considered in designing a program but the basic consideration, obviously, is the goals to be achieved by the schools.

A Taxonomy for Defining Goals of Instruction

Krathwohl¹⁹ believes that an essential step in defining the purposes of the school is to state goals for the instructional program, especially for the courses to be offered. This constitutes the intermediate or second step in his scheme for defining the purposes of the school. We chose to state first an ultimate aim for the school; hence, the formulation of instructional goals is the third step in our plan for defining the aims and objectives. But we wholeheartedly accept the taxonomical plan developed by Bloom, Krathwohl, and others as the basis for this third step.

The preparation of the *Taxonomy of Educational Objectives: The Classification of Educational Goals*²⁰ was a prodigious undertaking, but a very significant one for teachers and educators generally. Bloom and his co-workers established three domains for the classification of educational goals: the cognitive domain; the affective domain; and the psychomotor domain.

¹⁹ David R. Krathwohl, "Stating Objectives Appropriately for Program, for Curriculum, and for Instructional Development," *Journal of Teacher Education*, 16, 83-92 (March 1965).

²⁰ Benjamin S. Bloom and Others, *Handbook I: Cognitive Domain*; and David R. Krathwohl, Benjamin S. Bloom, and Bertram B. Masia, *Handbook II: Affective Domain* (New York: David McKay Company, Inc., 1956, 1964).

Cognitive domain. The cognitive domain includes those objectives that concern the acquisition of knowledge, its organization, and use. This area involves intellectual development, rationality, and the application and use of knowledge. Most of the instructional program of the present-day secondary school is concerned with these goals, and much of the curriculum planning and development in schools falls within this domain.

Bloom and his colleagues further subdivided each domain into classes and subclasses of educational objectives. Because most school systems, curriculum committees, and individual teachers who are working on the definition of educational goals today use this taxonomy, the complete list of classes and subclasses will be given here:

COGNITIVE DOMAIN

- 1.00 Knowledge
 - 1.10 Knowledge of Specifics
 - 1.11 Knowledge of Terminology
 - 1.12 Knowledge of Specific Facts
 - 1.20 Knowledge of Ways and Means of Dealing with Specifics
 - 1.21 Knowledge of Conventions
 - 1.22 Knowledge of Trends and Sequences
 - 1.23 Knowledge of Classifications and Categories
 - 1.24 Knowledge of Criteria
 - 1.25 Knowledge of Methodology
 - 1.30 Knowledge of the Universals and Abstractions in a Field
 - 1.31 Knowledge of Principles and Generalizations
 - 1.32 Knowledge of Theories and Structures
- 2.00 Comprehension
 - 2.10 Translation
 - 2.20 Interpretation
 - 2.30 Extrapolation
- 3.00 Application
- 4.00 Analysis
 - 4.10 Analysis of Elements
 - 4.20 Analysis of Relationships
 - 4.30 Analysis of Organizational Principles
- 5.00 Synthesis
 - 5.10 Production of a Unique Communication
 - 5.20 Production of a Plan, or Proposed Set of Operations
 - 5.30 Derivation of a Set of Abstract Relations
- 6.00 Evaluation
 - 6.10 Judgments in Terms of Internal Evidence
 - 6.20 Judgments in Terms of External Criteria

Affective domain. The affective domain includes those educational goals that state changes in the interests, attitudes, and values of students, the appreciations, feelings, goal-sets, and biases that students develop, and the types of behavior and relationships that persons exhibit. The authors

of the taxonomy state that schools often fail to define goals in this area or to plan educational activities for the achievement of such goals, and that efforts the schools have made in the past to develop feelings, attitudes, and the like were imprecise and difficult to identify. The publication of the *Handbook* for this domain has done a great deal to spur secondary schools throughout the nation to plan more carefully and to provide more fully appropriate learning experiences for the realization of affective goals. The classes and subclasses of this domain are as follows:

AFFECTIVE DOMAIN

1.0 Receiving (Attending)

- 1.1 Awareness
- 1.2 Willingness to Receive
- 1.3 Controlled or Selected Attention

2.0 Responding

- 2.1 Acquiescence in Responding
- 2.2 Willingness to Respond
- 2.3 Satisfaction in Response

3.0 Valuing

- 3.1 Acceptance of a Value
- 3.2 Preference for a Value
- 3.3 Commitment

4.0 Organization

- 4.1 Conceptualization of a Value
- 4.2 Organization of a Value System

5.0 Characterized by a Value or Value Complex

- 5.1 Generalized Set
- 5.2 Characterization

The psychomotor domain. The psychomotor domain includes goals that cover the development of manipulative or motor skills. Bloom and his co-workers on the first two handbooks, although recognizing the importance of this aspect of development, felt that the schools did so little in providing learning experiences of this kind that they chose not to develop a handbook for this area. However, Elizabeth Jane Simpson and her associates at the University of Illinois recognized that there was keen interest among educators in general, and, in particular, those working in the fields of vocational and industrial education, home economics, business education, music, art, and physical education, in the full development of this domain also. She has published a progress report of the work of the group. The classes and subclasses proposed are as follows:²¹

²¹ Elizabeth Jane Simpson, "The Classification of Educational Objectives: Psychomotor Domain," *Illinois Teacher of Home Economics*, 10:110-144 (Winter 1966-1967).

PSYCHOMOTOR DOMAIN**1.0 Perception****1.1 Sensory stimulation**

- 1.11 Auditory
- 1.12 Visual
- 1.13 Tactile
- 1.14 Taste
- 1.15 Smell
- 1.16 Kinesthetic

1.2 Cue selection**1.3 Translation****2.0 Set**

- 2.1 Mental set
- 2.2 Physical set
- 2.3 Emotional set

3.0 Guided response

- 3.1 Imitation
- 3.2 Trial and error

4.0 Mechanism**5.0 Complex overt response**

- 5.1 Resolution of uncertainty
- 5.2 Automatic performance

This taxonomy, with the three domains, each with its classes and subclasses, has in recent years become the most useful, hence the most widely used, plan for stating instructional goals for the courses of study offered, the activities sponsored, the services offered, and the interpersonal climate fostered among students and teachers. Goals stated in this form constitute the primary basis for developing curriculum guides, selecting textbooks and other instructional materials, and, in general, planning the total program of learning activities to be offered by the school.

Such a taxonomy enables the school staff and interested citizens who are concerned about their schools to evaluate the program of the school and to determine whether it is providing fully and adequately for the proper development of each individual pupil. As the authors point out in their handbooks, all too frequently when the school is checked against such a set of goals, serious gaps and deficiencies are revealed. Often in the cognitive domain instruction only deals with the first two or three classes, being confined to a knowledge of something, a low level of understanding indicated by "comprehension" or possibly some "application" of the knowledge. All too often the student is not required or expected to analyze, synthesize, or evaluate. However, it is only when the student achieves these higher levels of cognition that the fullest possible development results.

In the affective domain, the shortcomings of the school are particularly noted by Krathwohl:

The development of the affective domain has pointed up the problems in achieving objectives in this domain. For instance, a study of the relation of the cognitive and affective domains made it apparent that achievement in the affective domain is markedly underemphasized There was a great deal of "erosion" with respect to the affective domain objectives. When a curriculum is first conceived, affective objectives play an important part in the conceptual structure of the courses. But as time goes on, they cease to have influence on the direction of the courses or in the choice of instructional activities.²²

Stating Objectives for Instruction

Three basic and essential steps in the definition of the purposes the school is to serve in our society have been discussed: (a) the determination of the ultimate aim of education in our nation; (b) the listing of the aspects of human development for which the school accepts major responsibility; (c) and the definition of the goals which the school should seek to achieve through its educational program of courses, activities, and services designed to foster such development. We now move to the fourth and final phase of the determination of pupil outcomes being sought by the school. This is the statement of objectives which guide the day-by-day planning and instructional activities of teachers. Such objectives state specific, overt changes in students which the school expects them to achieve as a means of accomplishing the goals of the school—the cognitive, affective, and psychomotor attainments which the school postulates as significant ends for youth to attain.

The statement of objectives, whether for a year's course, a unit of work included in the course, or a set of learning activities being carried on in the development of a unit, shows the instructional route chosen by the teacher (or a committee of co-workers, or whoever formulated them) for the students to take in seeking to achieve an important goal of instruction. Obviously, in most instances, many routes are possible; that is, the teacher could use a great variety of classroom activities—lecturing, discussing, demonstrating, writing, listening, viewing, and the like—and a broad range of subject-matter content in seeking to achieve a goal. But an objective or set of closely related objectives constitute a choice from among these possibilities—a route has been designated for the pupils to use in arriving at the outcome desired. This is the primary purpose of an objective. Thus, it is now clear why the three steps discussed previously in this chapter first have to be taken in planning the curriculum

²² Krathwohl, pp. 89-90.

and instructional program. They state what the end outcome is to be, what goal is being sought; the objectives state overt means of attaining that end. For example, presume that this goal (third level of definition of purposes of the school) has been formulated by a committee of social studies teachers in preparing a guide for teaching the course in government:

The ability to distinguish among warranted, unwarranted, or contradicted conclusions propounded in a statement or speech.

Such a statement of a desired outcome does not indicate the kinds of learning experiences in which pupils should engage nor the content to be used in achieving the goal. Obviously, many alternatives are open to the teacher seeking to guide students in its attainment. Hence an objective or a set of them may be formulated that specify these things. Among other objectives this one would be appropriate:

In an address given by the President of the United States, each student should be able to identify several warranted, any unwarranted, and any contradicted conclusions and support with appropriate evidence or a value judgment the reasons for his selections.

But another equally appropriate objective for achieving this goal would be:

Leaders in some of the colonies proclaimed that "taxation without representation is tyranny." Is this a warranted, unwarranted, or contradictory conclusion and why?

Chapter 9 will consider in much greater detail the formulation of objectives for instructional planning. Here we are considering the nature and purpose of objectives as the fourth step in goal definition.

The Form of Objectives

It is appropriate at this point in a consideration of the formulation of objectives for instruction to discuss the form and nature of such statements. In recent years, a number of educators have insisted that objectives should state specifically and overtly what *changes* in the behavior of the learners are intended to result from the learning activities; other equally competent writers on curriculum planning question the wisdom of endeavoring to state everything the school does in terms of intended behavioral changes.

Among those who particularly favor the behavioral point of view is Robert F. Mager; he states that an objective "is a description of a pattern of behavior (performance) we want the learner to be able to demonstrate."²² His brief book gives teachers explicit instructions and practice

²² Mager, p. 3.

in writing objectives in behavioral terms. Several of the authors of a recent yearbook recommend wholeheartedly the point of view that the formulation of objectives for instruction requires "a description of the behaviors intended to be the outcomes or objectives of instruction," and they insist that planning must start with "a description of the 'terminal behavior' that specifies the instructional objective."²⁴

Ralph Tyler, recognized as an eminent authority on curriculum planning, stated long ago that "each objective must be defined in terms which clarify the kind of behavior which the course should help to develop among students; that is to say, a statement is needed which explains the meaning of the objective by describing the reactions we can expect of persons who have reached the objective."²⁵

W. James Popham, in replying to critics of the behavioral approach, identifies ten criticisms of behaviorally stated objectives; he then repudiates each one and proceeds to state in glowing terms why behavioral objectives are desirable.²⁶

The objections to specific, overt statements of the behavioral outcomes desired from school experience center around the fact that this approach results in a narrow, mechanistic, inadequate conception of the total educational process, and that it is not only impossible, but unwise, for teachers to attempt to spell out every anticipated outcome in terms of specific behaviors in advance of engaging in the learning activity itself.²⁷ Moreover, it is the contention of some specialists in the teaching of the humanities and fine arts that some of the important and significant outcomes of education cannot be stated readily in specific, overt behavioral terms because appreciations, attitudes, and feelings about things are prime objectives in the field of the arts and humanities. They plead for a more open, flexible situation in teaching that enables teachers to capitalize on the unexpected and the unplanned, that permits pupils to go afield on occasion and do things not specifically planned, or explore unanticipated, but often exciting, vistas.

The opposition of many educators to the current trend to phrase all

²⁴ Stephen M. Corey, "The Nature of Instruction," *Programmed Instruction*, 66th Yearbook, Part II, National Society for the Study of Education, Phil C. Lange, ed. (Chicago: University of Chicago Press, 1967), pp. 12-13.

²⁵ Ralph W. Tyler, *Constructing Achievement Tests* (Columbus: The Ohio State University, 1934), p. 18.

²⁶ W. James Popham, "Objectives and Instruction," *Instructional Objectives*; W. James Popham, and Others (Skokie, Ill.: Rand McNally & Company, 1969), pp. 32-64.

²⁷ For excellent statements of these points of view see Elliot W. Eisner, "Instructional and Expressive Educational Objectives: Their Formulation and Use in Curriculum," *Instructional Objectives*, pp. 1-31; Herbert M. Kliebard, "Curricular Objectives and Evaluation: A Reassessment," *The High School Journal*, 51:241-247 (March 1968); and J. Myron Atkin, "Behavioral Objectives in Curriculum Design: A Cautionary Note," *The Science Teacher*, 35:27-30 (May 1968).

objectives in behavioral and performance terms is well stated by the eminent educational philosopher, Harry S. Broudy:

Being creative, being critical, being intelligent, being uninhibited, being friendly, being socially acceptable are not outcomes to be defined behaviorally or explicitly in any really useful way. They are dispositions and attitudes that involve the total self of the pupil as he interacts with other selves, including the self of the teacher The course of their development can not be made in explicit goals toward which the teacher systematically undertakes this or that course of instruction. I realize that some educational literature talks as if they could and should, but not even trained psychologists would be so bold.²⁸

Not only, as Broudy points out, is it impossible to state in explicitly behavioral terms many of the essential outcomes desired from school experience, but the current effort to force all teaching into a didactical pattern in which the products of instruction are stated explicitly as psychomotor skills, knowledge of subject matter, conceptual skills, and the like, ignores the concomitant outcomes of a school experience. These in themselves may be even more important in the long run than those overt, behavioral objectives for which the teacher in the class strives so assiduously to achieve under this form of instruction. For example, the teacher of English may accept wholeheartedly as one of his important objectives, ". . . to gain an awareness in reading literature of human aspirations shared in common, the clash of values, the significance of everyday experience" (a very worthy objective). But in his literature classes, he nonetheless may be also achieving (probably unwittingly and unknowingly to him) a dislike and scorn of literary works in general among some of the students, because they feel that the literature being read is irrelevant, or written for times that no longer exist, or, simply, because they can see no sense in reading written works that do not deal with contemporary matters.

If a teacher were to try to write behavioral objectives for all of the concomitant learnings that readily could become products of a planned unit of instruction, there would be no end to this effort, nor, in fact, could they be predicted in advance. Many of these concomitant learnings are serendipitous and may be both desirable and undesirable, but nevertheless, significant and important.

The Purposes of Objectives

In a resolution of opposing points of view about the form in which objectives should be stated, it is necessary to consider what purposes a

²⁸ Harry S. Broudy, "Can We Define Good Teaching?" *The Record—Teachers College*, 70:589 (April 1969).

statement of educational objectives should serve in planning and teaching. An objective should:

1. State overtly what a student is expected to learn. What is the end to be achieved through instruction? These desired outcomes should be stated specifically in identifiable, observable, or measurable products that are aspects of growth and development. These products of education may be:
 - a. Knowledge of something—a thing, an event, an action, an occurrence, or whatever constitutes the matter being studied
 - b. Concepts, generalizations, and understandings that constitute the individual's analysis and synthesis of knowledge learned
 - c. Attitude, feeling, or an emotional set or disposition about something—a condition, a thing, a relationship, a behavioral act
 - d. Ways of responding and behaving in specific and overt environmental situations, either in relation to things, other persons and their acts of behavior, or situations that confront the individual
 - e. Skills and abilities to do particular behavioral acts
 - f. Feelings and concepts about one's self as a person in the world at large and about other persons with whom one comes in contact or works in common enterprises; ego development
 - g. Enjoyments, satisfactions, or disappointments; sense of well-being or of ill-being; of mastery or defeat; of coping successfully or failing
 - h. Application of knowledge to new situations and conditions

2. Designate clearly the nature of the learning activities that are appropriate for attaining the desired outcomes and the nature of the content that could be used in developing such learning experience

The nature of the activities in which pupils may appropriately engage are stated in the form of action verbs, such as:

To understand	To participate	To listen
To prepare	To perform	To solve
To use	To accept	To write
To compare	To recognize	To explain
To decide	To enjoy	To create

3. Indicate the kinds of measurements and other evaluations that should be made to ascertain the effectiveness of the learning opportunities provided. Did students attain the desired outcomes? How is this to be determined?

If an objective fulfills these three functions well—states the kinds of learnings we intend that pupils achieve, enables the teacher to plan and develop significant and meaningful learning experiences for students and provides a basis for evaluating the effectiveness of these learning experiences for students—then it is a good objective whether it is stated

in specific, overt behaviors that can be measured by applying specific, performance standards or whether it describes a learning outcome that contributes to the growth and development of students. We do not feel that all objectives in the school program must be stated behaviorally in the usual meaning of that term, but they should be phrased so as to indicate specifically the *kind* and *nature* of human development that we expect pupils to achieve.

Steps in the Process of Defining Aims

As summary of this chapter, we list the steps to be taken in the formulation of aims, goals, and objectives for the school and give examples of such statements.

- A. Defined on a system-wide basis. Formulated by the total school staff in cooperation with parents and other citizens. Adopted by the board of education as bases for school planning in all its aspects. Reviewed on occasion, and revised if deemed desirable.

1. *The Functions of the Secondary School*

- a. Type: States the duties and responsibilities of the school
- b. Form: Broad, fundamental statements
- c. Use: To state what the nature and character of the total program of secondary education should be
- d. Example: See page 131

2. *The Ultimate Aim of Education*

- a. Type: A broad inclusive statement
- b. Form: Philosophical
- c. Use: To provide a base for planning the total program of education of the community
- d. Example: See page 133

3. *The Aspects of Human Development for which the Secondary School Accepts Important Responsibilities*

- a. Type: Analysis of human living
- b. Form: Characteristics of persons evident in life activities
- c. Use: To determine what kinds of instructional programs should be provided by the school
- d. Example: See pages 137, 139

- B. Defined for the instructional and teaching program of the secondary schools. Formulated by system-wide committees of teachers and instructional coordinators, departmental staffs in individual schools, or by individual teachers. Revised continuously.

4. *The Goals of the Instructional Program*

- a. Types: Cognitive, affective, psychomotor skills
- b. Form: Use action verbs that state what the student is expected to be able to do
- c. Use: To plan the courses and activities to be offered
- d. Examples:

- (1) Deliberately examines a variety of viewpoints on controversial issues with a view to forming opinions about them
- (2) Listens to music with some discrimination as to its mood and meaning and with some recognition of the contributions of various musical elements and instruments to the total effect.
- (3) Writes skillfully, using an excellent organization of ideas and statements
- (4) Develops ability to recognize unstated assumptions
- (5) Understands and can explain generalizations about particular cultures
- (6) Discerns character motivation in fiction and drama, not only through what a character says and does but also through what other characters say about him and the way they act toward him
- (7) Learns independently and shows a desire to do so
- (8) Commands and uses the basic skills of reading for information, ideas, opinions, stimulation, and leisure
- (9) Endeavors to become informed on the backgrounds of the larger problems of our nation and of the world and makes an intelligent analysis of the issues involved
- (10) Believes in the conservation of human and natural resources, practices it, and supports programs and organizations concerned with this problem
- (11) Is motivated primarily by those moral and spiritual values that are a part of all religious faiths, as well as by those that are more sectarian in origin

5. The Behaviorally Stated Objectives of Teaching

- a. Types: The whole gamut of behavior—whatever is appropriate for achieving an instructional goal
- b. Form: Stated as performance standards for a specific act of behavior or as specific, overt things the learner should be able to do as a result of the learning experience
- c. Use: Determined for each learning activity guided by the teacher as a part of the instructional program whether written or simply kept in mind
- d. Examples:
 - (1) Can trace the steps in the passage of a bill into law by the state legislature
 - (2) Through appropriate tests can identify the principal chemical elements in a compound
 - (3) Correctly solves all of the quadratic equations assigned

- (4) Able to swim 100 yards
- (5) Can correctly punctuate an unpunctuated paragraph of words so as to express meaning in proper grammatical form
- (6) Can select passages from a play that portray the character of one of the persons
- (7) Given a human skeleton, the student can correctly identify at least 40 important bones of the body
- (8) Can list three major causes of the Civil War
- (9) Can respond correctly in Spanish when asked ten question in that language
- (10) Uses a band saw correctly and safely
- (11) Can name the four basic types of food for a balanced diet for humans
- (12) Is able to prepare a good dessert
- (13) Can drive an automobile through downtown traffic without a single important violation of safety standards

Additional Suggestions for Further Study

1. Briggs, Thomas H., *Secondary Education*. New York: The Macmillan Company, 1933. Chapters 13 and 14 comprise the most extensive and complete definition of the special functions of secondary education ever prepared. Interesting from a historical viewpoint, but a good starting point in considering the role of the secondary schools in our nation today.
2. Commager, Henry Steele, "A Historian Looks at the American High School," *The High School in a New Era*. Francis S. Chase and Harold A. Anderson, eds., Chicago: University of Chicago Press, 1958. An eminent historian discusses the role of the high school, pleading for a shift from some of its functions in the earlier part of the century to those more pertinent to the modern era.
3. The Committee on the Objectives of a General Education in a Free Society, Harvard University, *General Education in a Free Society*. Cambridge: Harvard University Press, 1945. The first three chapters of this excellent report discuss education in the United States with particular reference to functions and purposes of the schools. The book emphasizes the need for a unifying purpose in American education, and then the Committee seeks to find this purpose in a plan for general education of all youth.
4. Gronlund, Norman E., *Stating Behavioral Objectives for Classroom Instruction*. New York: The Macmillan Company, 1970. A guide for writing objectives. Replete with examples.
5. Kibler, Robert J., Larry L. Barker, and David T. Miles, *Behavioral Objectives and Instruction*. Boston: Allyn and Bacon, Inc., 1970. This detailed, simple handbook is useful in understanding the nature of behavioral objectives and in writing them. Practice exercises are included.
6. Sergiovanni, Thomas J., and Robert J. Starratt, *Emerging Patterns of Supervision: Human Perspectives*. New York: McGraw-Hill, Inc., 1971. An excellent Chapter 12 considers the nature of goals and discusses steps to be taken in defining them. Several useful models are included.
7. Wheeler, D. Kenneth, *Curriculum Process*. London: University of London Press, 1967. In Chapter 4, the author, a professor of education in Australia, brings together a number of statements of the aims of education, including some from educators in other countries, and analyzes them. He then proposes his own set of criteria for defining aims.

CHAPTER 5

Teachers for the High Schools of Today and Tomorrow

Because this book is written for teachers, undergraduates preparing to become teachers, and administrators and staff personnel of the schools who are responsible for the selection, assignment, and some aspects of the continued professional development of the teacher, it is appropriate that we think about the nature and character of teaching and professional endeavors in the high schools of today and tomorrow and the kinds of personal and educational development that will enable teachers to become outstandingly successful in their work with youth.

We shall discuss the characteristics of teachers and offer some advice and counsel on preparation for service in the profession under four major aspects:

1. The teacher as a person
2. The teacher as a professional
3. The teacher as an organizational person
4. The teacher as a member of the social group

We, of course, regard a teacher as a totally integrated human being—having a unique personality and an individuality that in and of itself is much greater than the sum of any specific traits, characteristics, and competencies. A personality cannot be dissected and analyzed part by part without relation to the totality of individuality, nor would we assume that there is any one set of competencies, characteristics, or traits of behavior for each of these four aspects that can by themselves be identified as essential for success. Effectiveness as a teacher is unique to each individual and results from one human personality interacting with other human personalities in ways that contribute significantly to the total development of each person involved in the interactive process.

In light of the myriad facets of human behavior and the factors involved in the interactive process between human beings, it is impossible to state categorically the competencies of an effective teacher or to prescribe types of behavior in each category of the professional act of teaching that would ensure success for any person who exhibited the right mixture of these behavior patterns. Success as a teacher is a highly individualized matter that defies description or the definition of success.

Hence in the following sections of this chapter we will not present prescriptions, rules, or lists of traits that assure success in teaching; rather, we will discuss the broad aspects of the work of a teacher and offer suggestions for individual development that should, we believe, enable the teacher to become truly effective.

The Teacher as a Person

First and foremost a teacher is a person—a human being with a unique personality that is the totality of all of his behavior in his relationships with other human beings and in his expression of his selfhood and individuality.

Self-Fulfillment

The primary and essential characteristic of the teacher as a person is that he is true to himself; he is a person who has achieved a high level of self-actualization; he is a fully functioning self, one with himself, and one who is happy in his relationships with other people. He has as good a feeling of self-contentment and self-satisfaction as it is possible for one to achieve. Such a person has a high measure of openness not only to the world in general but particularly in his relationships with others; he has firm convictions and beliefs of his own, but he fully respects the right of others similarly to formulate their own philosophies of life and define for themselves their own individual sets of values and beliefs. This is not to say that he necessarily agrees with their points of view and their value systems, but rather that he accords them the same dignity and respect as he would want his fellow men to accord him in holding fast to his own ideals.

He can face the world, and any small segment of it, too, with confidence, with a feeling that he can cope with it adequately in his own way, yet in a way that portends good for anyone else who may be affected by his activities. He is willing to accept the world as it is now, but seeks ways in which he can make it a better world for himself and for others. Yet he is not an impractical visionary, a daydreamer who yearns for the best but is unable to do much about trying to attain it. He generally is positive in his outlook.¹

¹ Dr. Arthur W. Combs, the eminent humanistic psychologist, has written an excellent

Model Person

If we single out any one personal trait as a leading characteristic of a successful teacher, it undoubtedly is a deep-seated, honest, and all-pervasive concern for human beings. He believes in people; he respects the dignity of each individual and regards him and works with him in classroom situations as a person of supreme worth—a person who, like the teacher himself, can attain perfectibility in terms of his own potentialities and capabilities.

In his work with the young the teacher makes no distinctions and does not act disrespectfully in any manner because of race, color, social status, religion, or other artificial factors that have no bearing on the student's potentialities for maximum growth and development. Yet he does respect individuality, and plans his entire program of instruction in terms of the individual members of his group. But concern for the uniqueness and potentialities of each individual is a far different matter from distinctions based on artificial factors that lie outside of the capacities of the individual himself. As Erikson, the eminent psychiatrist states, ". . . The most deadly of all possible sins is the mutilation of a child's spirit; for such mutilation undercuts the life principles of trust, without which every human act, may it feel ever so good and seem ever so right, is prone to perversion by destructive forms of conscientiousness."²

The teacher is inevitably a model of one kind or another for his pupils. His way of living, his habits, his moral behavior, his manner of relating to other people, particularly to the students themselves, his concerns, his degree of compassion, his friendliness—in fact, the full gamut of his behavior as witnessed by his pupils in the classroom or community at large—are observed and noted by his students and serve as examples of how a person who holds a special relationship to them acts and behaves. It is not that the pupils necessarily will imitate, even sanction, or exemplify his modes of behavior—for behavior is the product of an unaccountable variety of influences and innate predispositions, of which the family and close associates among his peer group probably are far more important—yet the influence of the teacher is of significance, and we all need to be highly aware of this.

The highly successful teachers are those who especially exhibit in their relationships with students and with members of the social group at large compassion, concern, and respect for human personality, fairness, openness, honesty, justice, courage, fidelity, and an approach to

description of the teacher as a person: *The Professional Education of Teachers: A Perceptual View of Teacher Preparation* (Boston: Allyn and Bacon, Inc., 1965).

² Quoted from Jonathan Kozol, *Death at an Early Age* (Boston: Houghton Mifflin Company, 1967), p. vii.

life and all of the myriad problems that a teacher faces day by day that exudes confidence, self-assurance, and stability.

Herbert Kohl, who describes in a most insightful way his year of teaching in an East Harlem school, points out that:

The ideal of a teacher as a flawless moral exemplar is a devilish trap for the teacher as well as burden for the child. . . . Of course, the teacher is a moral exemplar—an example of all of the confusion, hypocrisy, and indecision, of all of the mistakes, as well as the triumphs, of moral man. The children see all of this, whatever they pretend to see. Therefore, to be more than an example, to be an educator—someone capable of helping lead the child through the labyrinth of life—the teacher must be honest to the children about his mistakes and weaknesses; he must be able to say that he is wrong or sorry; that he hadn't anticipated the results of his remarks and regretted them, or hadn't understood what a child meant. It is the teacher's struggle to be moral that excites his pupils; it is honesty not rightness, that moves children.³

Richness of Experience

If the teacher is to have a deep concern for all of the youth with whom he works, it would seem desirable for him to have had as rich and extensive experiences as possible in knowing, relating to, and working with people with a wide variety of backgrounds, experiential patterns, talents, and social, cultural, and personal experiences. To have a deep concern for each individual within the wide range of personalities encountered in a school, the teacher himself should have had close, deep, and mutually satisfactory relationships with a variety of people constituting as much as possible the spectrum of social, economic, intellectual, creative, and occupational experience.

It may not be feasible for colleges of education themselves to provide these kinds of experiences with a variety of other people, but they should encourage students in every way possible to have such experiences. "Live-ins" in ghetto areas for those undergraduates who have never lived in the ghetto themselves, extensive travel experience, particularly in foreign countries, work experience in a variety of occupations extending from the simplest kinds of unskilled work to occupations of a skilled, creative, or managerial type, experiences in social service of various kinds, opportunities to work on a one-to-one basis with a variety of people, ranging from children to senior citizens, participation in organizational activity of civic, social, and economic groups, particularly those that provide services for people that are socially and economically deprived

³ Herbert Kohl, *36 Children* (New York: The New American Library, Inc., 1967), p. 15.

and of different cultural environments, should become a part of the program for the education of teachers.

A richness of understanding and a most stimulating basis for working with pupils may come through the cultivation and pursuit of a number of interests by the teacher himself. A teacher who is excited about the fullness of life, who seeks opportunities to broaden his range of activities, not only has things he can share with his pupils but exemplifies to them the richness of life that all can enjoy if they seek to become truly adequate persons.

The teacher should be well-informed, and in this section, which is concerned about the teacher as a person, we mean well-informed on a great variety of matters that are outside of his field of professional specialization and competency. The teacher who keeps abreast of political, social, and economic developments not only in this country but throughout the world, regardless of whether or not he teaches in the field of the social sciences, is obviously in a better position to inspire and guide the learning activities of his pupils. The teacher who keeps abreast of new plays, new movies of artistic and cultural merit, and new books—both fiction and nonfiction—reads and views the news, can discuss the works of the foremost and emerging artists of our day or the composers and performers of music, can discuss sports with his students, has an understanding of some of the technological and scientific developments of the times, and has some knowledge of political developments and points of view of political leaders in major countries of the world is indeed the kind of a teacher who has the potentialities of exciting youth about the world in which they live.

We would hope that a teacher would be creative in a broad meaning of that term. If he has a flare for expressing himself in the graphic arts, playing or composing music, writing, acting, inventing, or growing fine plants, he has himself demonstrated efforts to become fully developed and is obviously a better person thereby to help adolescents become self-actualized.

Activism

We feel that many teachers, if it suits their predispositions and concepts of themselves as persons, may well be activists—not in the sense in which that term has been used in recent years to designate persons who rebel against the established social and political order, but rather as persons who actively seek to change things that militate against the fullest possible individual attainment. Activism can take a number of forms, but the essential point is that the individual takes steps of a legal and peaceful nature to bring about changes in social conditions, political agencies, military organizations, schools, universities, industrial enterprises, labor organizations, teacher organizations, or whatever established

institutions he believes—and other people of a high level of social responsibility also believe—deny to groups or classes of people the opportunities for a full measure of self-development.

To make our intent clear, we limit approval of activism in the social and political realm to peaceful and legal means of bringing about change. The teacher by the very nature of his professional responsibilities is in a strong position to be an activist on behalf of children and youth and also of adults who themselves have not been able to break the bonds of suppressive restrictions, rules and regulations, or the deadening effect of social, economic, and occupational practices.*

Rather obviously, a successful teacher should have good physical and mental health. But good physical health most certainly does not mean not to be disabled; some of the best teachers we have known are teachers who had disabilities, including blindness, a crippling condition that required constant use of a wheelchair, or other physical disability (but not a disease). Teaching is physically and mentally a very demanding job, and teachers who lack the stamina or the emotional stability to thrive on the demands made on a teacher's strength will, of course, be in serious difficulty.

The Teacher as a Professional

The most important responsibilities and duties of a teacher, are, of course, the activities he carries on in his professional capacity in schools. We define teaching as everything the professional person designated as a teacher does in providing and carrying on the schooling of students. Hence, we will consider briefly in this section the work of a teacher as a professional person employed by a school system to carry out the functions, purposes, and goals postulated by society as appropriate for its schools.

It is evident, therefore, that the professional work of a teacher is a complex, widespread, many-faceted endeavor, and, moreover, that it is highly individualistic and personal. Nevertheless, for purposes of our discussion, we present in Figure 9 a model of the professional act of teaching that attempts to present the three principal and inclusive aspects of teaching. These professional acts have been grouped into three major categories:

1. Planning
2. Interacting with students
3. Evaluating and appraising

* For a shocking report on what happened to one teacher when he became active in a social cause, see Chapter 12 of Kozol's book.

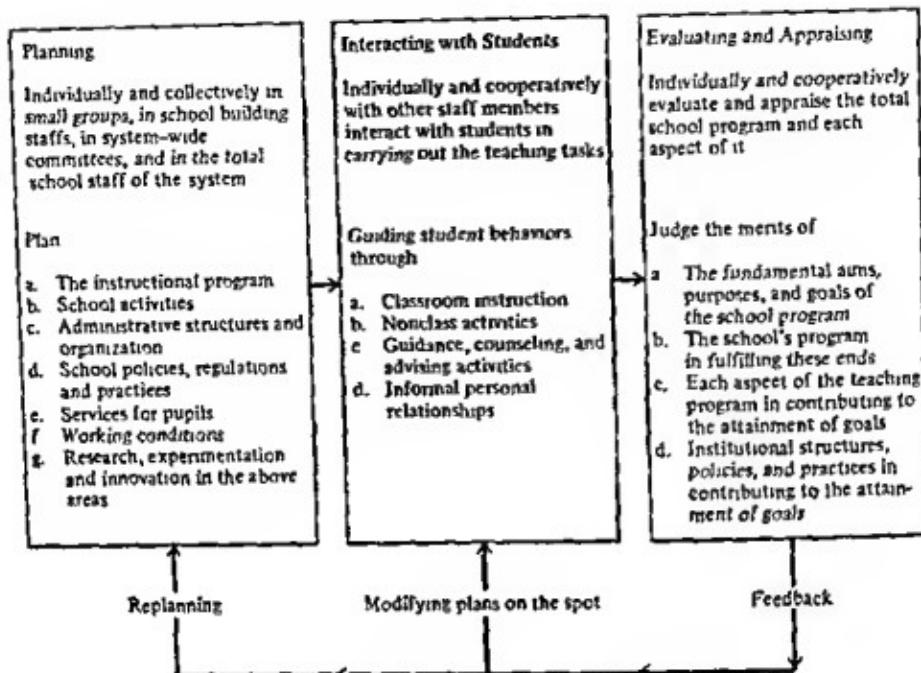


Figure 9. The professional work of teaching.

Each of these aspects of the professional work of a teacher will be treated in much greater detail in later chapters of this book, particularly Chapters 9 through 11.

The reader may wish to compare and contrast our categorization of the professional work of teachers with those of some other authorities. In 1968 the United States Office of Education contracted with nine teacher-training institutions to prepare models for the education of elementary school teachers. All of these plans analyze in one manner or another the work of teachers. G. Wesley Sowards, who directed the formulation of the model proposed by Florida State University, defines five tasks teachers must perform:

1. Analysis of goals and analysis of learner status
2. Formulation of instructional objectives
3. Selection and organization of content
4. Employment of appropriate strategies
5. Evaluation of outcomes of instruction⁶

Bruce R. Joyce, who directed the project at Teachers College,

⁶ G. Wesley Sowards, *A Model for the Preparation of Elementary School Teachers*. Final Report, Project 8-9021, U.S. Office of Education, Bureau of Research (Washington, D.C.: Government Printing Office, 1968), p. 7.

Columbia University, based his entire model on the teacher as an innovator. He postulates four roles for the "Teacher-Innovator":

1. The institution-builder-shaper of the school, working with others to design complete educational programs and organizational structures to bring them into existence.
2. The interactive teacher—the most familiar teaching role occurs during contact with children. . . . He controls a wide variety of teaching strategies and a wide range of technological assists to education.
3. The innovator—needs to combine personal creativity with ability to work with others to build educational settings in which innovation rather than imitation is the norm.
4. The scholar—controls techniques for studying the processes of interactive teaching and theories of learning. He specializes in one discipline. . . . He controls structures for studying the school and for studying teaching and learning. . . .⁸

These extensive and scholarly studies contribute to our thinking about teaching and the work of a teacher as a professional person and support our use of the three major categories of responsibilities listed above. A more detailed treatment of the work of a teacher follows.

Planning

Teachers do a tremendous amount of planning, both formal and informal or of an on-the-spot nature. The box in Figure 9 states in broad terms some of the aspects of planning in which teachers formally participate.

First, and foremost, is, of course, the entire process of planning the instructional program of the school. Teachers may serve as members of a city-wide committee that has responsibility for preparing a course of study or curriculum guide for a subject field, such as a guide for the teaching of English, grades 7-12, chemistry, or physical education for boys at the senior high school level. In some school systems such curriculum guides or courses of study on occasion are prepared by the individual high school itself. Often such planning is done by departmental staffs and the teacher participates as a member of the department in such planning activities.

But in the end it is the teacher himself who must plan the instruction of boys and girls in his classes. Of course, he will draw extensively on the plans already developed by teacher committees, the departmental staff, the state department of education, national curriculum study committees, or whatever agency may have made available plans for his subject area

⁸ Bruce R. Joyce, *The Teacher-Innovator: A Program to Prepare Teachers*, Final Report, Project 8-9022, U.S. Office of Education, Bureau of Research (Washington, D.C.: Government Printing Office, 1968), pp. 16-17.

and specific courses. But he is the one who must finally determine the learning activities in which pupils in his classes will engage. Chapter 9 considers in detail these aspects of planning.

Instructional planning, whoever does it or whenever it is done, should encompass these six aspects:

1. Pupil outcomes being sought through the instructional program. Intended outcomes need to be stated for the total program of the school itself, for an area or a field of instruction, for individual courses, and for each major unit of instruction developed in the course.

2. The organization of instruction on the basis of some appropriate organizing element, focal point, center of interest, theme, or mode. Instruction must be organized on some basis, and the teacher must determine what these organizing themes or modes should be.

3. The substantive content appropriate for use in courses and specific units of instruction within the courses in seeking to obtain the outcomes desired.

4. Teaching strategies and methods. What are appropriate activities for the pupils in seeking to achieve the stated objectives?

5. Selection of appropriate instructional materials.

6. Evaluation of pupil behavior or development to ascertain the extent to which the stated objectives have been attained.

As shown in the model, other aspects of the school's program must also be planned, and teachers generally are involved to some degree in these planning activities. The extracurricular program of the school requires careful and insightful planning if it is to contribute fully to the education of young people. Nevertheless, in too many schools careful and thoughtful planning of extraclassroom activities is minimal, with the result that the educational development of students is seriously neglected in this particular phase of the school's endeavors, and much time, effort, and money are wasted.

Although practices vary greatly among the secondary schools of this country, it is our belief that teachers should be extensively involved in planning the administrative aspects of the schools, such as organizational structures, use of time, space, and facilities, types of facilities, equipment, supplies, and the like to be made available, and many other matters involving management policies, student conduct, reporting and marking pupil achievement, testing practices, grading and promotional policies, graduation requirements, and many administrative matters that relate directly to the work of teachers. As will be discussed later, the teacher should be involved in the determination of working conditions, assignments, staff responsibilities, and the like.

Another area in which teachers should also participate in the planning processes is the services to be provided by the schools, such as health, food, guidance and counseling, library, and transportation. Usually,

the specialists in each of these areas will formulate tentative plans and recommendations, but the final plans for the provision of such services should be considered by the entire teaching staff.

A matter of school planning that should receive increasing attention in the years ahead is the formulation of plans for carrying on research, experimentation, and innovation in the school. In Chapter 12, we present ideas for the development of high schools in the years ahead; obviously, teachers will need to be extensively involved in planning the high school of the future.

Interacting with Students

Teaching is essentially an interactive process between two people in which one person (the teacher) has the responsibility or assumes the responsibility of assisting the other person in achieving certain behavioral outcomes. The essential ingredients of the teaching act, then, are interacting persons with the aim that the learner (the teacher himself often is also a learner) will acquire some desired behavioral outcomes.

The outcomes being sought through the teaching act are generally those for which plans were developed previously by the person designated as "teacher." The person being taught is expected to change some aspect of his personality so that he will behave in accordance with the outcomes postulated at the outset as desirable. It should, of course, be emphasized that as he works with students, the teacher modifies plans, replans, and continues to plan on the basis of what happens in the interactive process and the feedback he obtains from the boys and girls themselves as they work together in various situations in the school.

The teaching strategies which he will use with a particular group of pupils at a particular time in their education will initially grow out of plans previously developed for the instructional program. The development of teaching strategies is the professional act that primarily ties together the products of planning and the interactive process in the classroom itself. The teacher must translate his instructional plans into teaching strategies of various kinds which he selects not only on the basis of the plans he has previously developed but on the basis of the pupils themselves—their interests, educational needs, motivations, capabilities, stock of previous learnings, status of social, emotional and intellectual development, and many other factors. It is the teacher's responsibility to contrive learning situations which are conducive to pupil behaviors that will lead to the attainment of the desired educational objectives. Chapter 10 discusses teaching in great detail.

Teachers frequently also have responsibilities to serve as sponsors of extracurricular activities. As noted previously, plans should be developed for these instructional programs also, and the teacher will have a wide range

of possibilities in the way of interactive strategies available in working with pupils in these less formal instructional programs. The nature and character of the objectives being sought through these activities often differ considerably from those of classroom instruction; this would presume the use of different strategies and different methods in directing the activities of the participants.

Teachers interact with pupils in informal and often nonscheduled types of encounters in the school. Most teachers serve as advisors, to some extent at least, for designated pupils and certainly as informal advisors of students in their classes and activities. And all teachers, obviously, have many informal contacts individually, in small groups, or even in larger groups, with pupils outside of the regular program. The character and nature of these personal relationships are very important elements in the education of students and often may have significant and lasting results in terms of changes in pupil behavior. A kind and understanding comment to a pupil met in the hall or, on the other hand, a sarcastic, critical comment may have far more effect on student behavior and student attitude than an entire period of formal class instruction.

The important thing for teachers is to recognize that the act of teaching is being carried out whenever the professional person designated as a teacher interacts with pupils at any time and in any place within the school, and that such encounters may contribute in one way or another to changes in pupil behavior. Pupil behavior is not simply a matter of acting on knowledge or of cognitive development; it also involves attitudes, values, self-concepts, motives, modes of behavior, rational action and the like. Teachers, whenever they interact with students, whether it is in formal classroom situations or in a chat in the lunchroom, may be guiding the development of one or more of these behavioral changes.

Evaluating and Appraising

Appraising and evaluating the program of the school is one of the most demanding and difficult responsibilities of the teacher. It is evident to thoughtful observers of our schools, to teachers, and to administrators that we really lack a definitive, adequate, and completely valid base on which to judge the merits, successes, and deficiencies of our educational program for youth. Obviously we make some broad and general conclusions about the success of the secondary schools in this country, and undoubtedly much of this is highly valid and accurate, but when we look at individuals themselves or endeavor to determine the effectiveness and adequacy of specific programs of instruction in the schools, we are often unable to make really definitive judgments.

Inasmuch as one of the most important responsibilities of teachers is to formulate the goals, aims, and objectives not only of the school itself

but of each specific area of instruction and even each unit of work in which pupils engage, one of the most important aspects of evaluation is to determine the validity and appropriateness of such lists of aims, goals, and objectives. If the purposes are not fully valid and appropriate, obviously the instructional program will also lack validity and appropriateness.

As we have pointed out, the two fundamental factors to be considered in planning programs of secondary education in this country are the young people to be educated and the social conditions in which the school itself functions. Hence, these two factors, in turn, are the fundamental bases on which we should evaluate the validity, appropriateness, and comprehensiveness of aims, goals, and objectives we postulate for the school itself. The principal purpose of the first four chapters of this book has been to provide some knowledge, insight, and understanding of youth and of social conditions so that the reader not only has some bases for formulating objectives but leads as to what other kinds of information, generalizations, and knowledge he needs for making such an evaluation.

The second aspect of evaluation is to determine the extent to which the school as a totality is achieving these goals and purposes and is providing an educational program that is enabling each child individually to achieve the ends-in-view. Evaluation of the school's total program would involve follow-up studies of graduates in many aspects of their total development, successes and shortcomings in further schooling at higher levels, and their own reactions to the program provided them at the school when they attended.

But the evaluation of the total program of the school would need to include overt measurement and data collecting on a broad base. Such testing should involve measures of personality, social development, emotional development, intellectual attainments and achievements, and, in fact, measures of all aspects of human development.⁷

The third type of appraisal in which the teacher must engage is evaluation of his own instruction and his own work in nonclassroom aspects of the educational program. The evaluation of classroom instruction is extensively considered in Chapter 9 and the reader will understand the scope and nature of classroom evaluation after studying it. Here, we simply point out that the evaluation of classroom instruction is a demanding responsibility and a continuing one that should constantly be a part of the instructional program day by day in each classroom.

Evaluation of the instructional program in nonclass activities such as

⁷ On matters of evaluation of the school's program see particularly, Galen Saylor, "National Assessment: Pro and Con," *The Record—Teachers College*, 71:588-597 (May 1970); and Walcott Beatty and others, *Improving Educational Assessment and an Inventory of Measures of Affective Behavior* (Washington, D.C.: Association for Supervision and Curriculum Development, 1969).

the extracurricular activities of the school, the social climate of the school, the services of the school, and the like also should be done systematically and comprehensively. Most schools seriously neglect this aspect of evaluation, confining it almost entirely to a record of the games won and lost in intercollegiate sports, audience reaction to musical and dramatic programs, exhibits of art and other creative productions during school open house days, and the like. But evaluation of these nonclass programs should be much more extensive and much more penetrating than these important but limited types of evaluation. It should be concerned with the pupil outcomes achieved through the nonclass programs—what changes really occurred in pupil behavior or behavioral potential?

A fourth type of evaluation listed in Figure 9 deals with institutional structures, policies, and practices in the school, and in the school system itself. A continuing in-depth evaluation of the extent to which the school itself is making it possible for the professional staff and the pupils to devote their energies to the achievement of the goals and objectives postulated for the schools is essential. Moreover, it is necessary that the structure of the whole system of schools in the community be examined periodically, not only by the teachers and administrators but also by the citizens of the community. Are organizational structures interfering with the carrying out of the educational program rather than contributing to it? Are ample opportunities being provided to all of the adolescents and young adults of the community for education? Are artificial barriers being erected that curtail or limit the educational opportunities for some of the young people of the community? Is the school budget ample to enable the school district to provide the kinds of opportunities, facilities, resources, and programs essential for a good educational system? Has the state legislature enacted laws that permit the local system to provide the best educational program feasible for the youth of the community?

Another aspect of this evaluation would be evaluation of the competencies, abilities, and qualifications of the teaching staff itself. Does the class size and the teacher-pupil ratio enable the school to provide the best possible program for the education of its students? Are the assignments of teaching responsibilities proper? Is the staff fully involved in decision-making on matters of school policy, program, and operation? Are teachers compassionate and considerate of students and interested in their total development?

In administrative practices are the regulations about pupil conduct restrictive or developmental? Are pupils involved in decision-making on matters that concern them, including curriculum, nonclassroom activities, pupil conduct, food service, and all sorts of things that directly concern the pupil and his education? Is the social climate of the school such as to be conducive to normal and proper human development? Is there

complete social equality among all of the students of the school? Are the requirements for graduation valid? Is the marking system consistent with sound educational and psychological principles? Is the whole host of regulations about pupil conduct and behavior valid, appropriate, and respectful of human dignity?

The results of such evaluations should be fed back into the instructional system, resulting in a revision of existing plans and additional planning if such is indicated on the basis of the appraisal.

The Teacher as an Organizational Person

The teacher is a member of a great profession which comprises more than two million persons employed in the public school systems of the United States alone and another fourth of a million in the nonpublic schools.⁸ Almost a million of these professionals are classroom teachers in secondary schools. Teachers comprise, by far, the largest professional group in the United States.

The members of the teaching profession are organized in professional associations of various kinds much more extensively than are members of other professions, even in proportion to numbers. *The Education Directory*, Part IV, issued annually by the United States Office of Education, lists more than 1400 professional education associations of a state or national scope. In addition, many of these organizations have branches or affiliated units in local school systems.

Although they differ significantly in the scope and breadth of their program and activities, professional organizations generally serve these functions:

1. To work for the improvement of the program of education generally and to advance the cause of schooling in this country
2. To promote improved welfare and working conditions for teachers
3. To foster professional status and prestige
4. To advance the professional knowledge and ability of teachers
5. To contribute to the formulation and clarification of objectives and aims of education and a basic conception and philosophy of education and schooling
6. To make studies, conduct research, and to carry forward various kinds of projects that will benefit educational practice

Some organizations serve only one or a few of these major functions; others endeavor to fulfill all of them. But the character and quality of their activities, regardless of the scope, vary from the innocuous, almost futile,

⁸ U.S. Office of Education, National Center for Educational Statistics, *Statistics of Public Elementary and Secondary Day Schools, Fall 1969* (Washington, D.C.: Government Printing Office, 1970), p. 10, and *Digest of Educational Statistics, 1969* (Washington, D.C.: Government Printing Office, 1970), p. 5.

efforts of a puny, inept organization to the far-flung program of a national association.

Professional organizations may be classified in several ways but probably the most useful is in terms of the scope and nature of their program. On this basis, we can identify two general types, with subdivisions under each:

1. *General teachers' organizations.* These are organizations that seek to serve the interest of educators generally, regardless of their position, duties, or nature of employment:

- a. National: Example, National Education Association, American Federation of Teachers
- b. State: Example, New York State Teachers Association
- c. Local: Example, Denver Classroom Association, Detroit Federation of Teachers

2. *Specialized membership.* Organizations that serve the interests of specialized groups of teachers:

- a. Area of instruction: Example, National Council of Teachers of English, Modern Language Association, Music Educators National Conference.
- b. Professional duties: Example, National Association of Secondary School Principals, Association for Supervision and Curriculum Development, Association of Classroom Teachers
- c. School level: Example, American Association of Elementary-Kindergarten-Nursery Educators

Obviously, a teacher should choose wisely among all of these professional organizations. Usually, he will join one of the national general teachers' organizations including membership in the local group and the state organization. In addition, many teachers choose to enroll in one or more specialized groups. It is in this type of professional organization that a considerable range of choices is available.

Collective Negotiations, Strikes, and Teacher Militancy

Traditionally, teachers, individually and collectively through their own professional organizations, have largely avoided political action, protest movements of any kind, or even any serious confrontation with their employers—the local boards of education—over matters of salary, working conditions, teacher welfare, or job assignments. They felt they truly were professional people whose sole concern was the development of the young entrusted to their care and that any overt political act, social action, or involvement in community issues and problems should not be a part of their collective or individual activities. They regarded themselves, as did the public, as civil "servants," and the servant part usually was meant to imply the original connotation of a servant.

Even after organized labor movements among employees in business

and industry had been fully accepted and regarded as a right of the working man and given legal approval through such laws as the National Labor Relations Act of 1935, the Taft-Hartley Act of 1947, and the Landrum-Griffin Act of 1950, teachers were not accorded the right to organize for collective bargaining purposes. In fact, many states had laws that prevented strikes or collective bargaining action by teachers and other public employees. But beyond any laws on the matter, public opinion was such that one of the surest ways of being dismissed from a teaching position, unless tenure laws protected the individual, was through political action or meddling in community issues of a highly controversial nature. And even when tenure laws provided a measure of protection, there still were ways in which the citizens of the community or the board of education could harass or threaten the teacher in such a way that further service in the community was ill-advised.⁹

Fortunately for the members of the profession, this whole situation changed dramatically and drastically in the latter part of the 1960s. Today, teacher militancy is a fact and, although probably still not approved by the public generally, is accepted as a political and social condition of the times. In many cities, it is approved by a substantial part of the community, particularly people who are members of labor unions. By the end of the last decade, strikes by teachers had become commonplace, and collective bargaining by teachers had already been sanctioned by law in 22 states¹⁰ and accepted as a part of their personnel policies by school districts. In many other states unless collective bargaining by teachers was overtly prohibited by law.

Regardless of the legal status of the matter throughout the nation, there is no question but that teacher militancy has resulted in widespread advancements in salary, working conditions, welfare, professional status, participation in school decision-making processes, and the like. It may popularly be said that it is no longer the teachers who are "running scared" with respect to political and social action but the citizens of the community and the legally established boards of education.

Strikes. T. M. Stinnett, summarizing a study made by the Bureau of Labor Statistics, states that there were 110 teacher strikes between 1940 and 1962. About 49,000 teachers were involved in these strikes, about two thirds of which occurred during the postwar period of 1945-1952. Only 20 of the strikes occurred between 1953 and 1962. The Bureau identified 17 of these strikes as major work stoppages.¹¹

⁹ Again, read Jonathan Kozol's experience in Boston, previously cited.

¹⁰ National Education Association, Research Division, "Negotiation Statutes Enacted through August 31, 1969" (Reproduced report).

¹¹ T. M. Stinnett, *Turmoil in Teaching: A History of the Organizational Structure for America's Teachers* (New York: The Macmillan Company, 1968), p. 143.

The strike that really started the wave of militant actions by teachers in the 1960s was a one-day strike called by the United Federation of Teachers of New York City for April 11, 1962. About 20,000 of the city's 40,000 teachers remained off the job that day, and the strike as a vehicle for bargaining by teachers for better pay and working conditions was initiated.

The Bureau of Labor Statistics lists 16 "work stoppages" (the term used by the Bureau since many teachers claimed that their absence from work was not technically "a strike") during the period of 1963 through 1965.¹²

The school year 1965-1966 was a turbulent one, not only because of a number of extensive and serious work stoppages but also because of militant action by organized groups of teachers throughout the year threatening strikes and work stoppages of all kinds by the ensuing fall if contract demands were not met. Stinnett estimates that in that year alone there were about 35 strikes.¹³

The crescendo of strikes, work stoppages, mass resignations, and similar modes of militancy increased in 1967-1968. Most teachers of the New York City School System struck for 14 days when schools were scheduled to open in September; in Florida, a statewide strike was called by the Florida Education Association, and it continued in some districts for as long as three weeks. Similarly, teachers in the state of Oklahoma staged a one-day walkout in an effort to obtain larger appropriations from the state legislature. Another serious strike during the year was staged by more than 5000 teachers of the Montgomery County, Maryland, School District. It began on February 2, 1968, and lasted for one week.

But the most serious, most extensive, and most militant teachers' strike of recent years was the walkout of most of the 100,000 teachers of the New York City School System. It was actually a set of three closely related strikes that closed the schools of that city almost completely from the opening day on September 9, 1968, until November 19, 1968. This strike was not over salaries since the contract negotiated as a result of the September 1967 strike was still in effect, but was primarily concerned with control over the transfer and assignment of teachers within the system. The strike was a very serious one for the children, teachers, parents, and citizens of New York City and was a clear demonstration to the nation at large that teachers were willing to become very militant and aggressive, using the strike as effectively as labor groups had ever used it in the history of labor-management relationships in the United States to gain collective control over working conditions.

The National Education Association reported that 131 strikes or

¹² Stinnett, p. 145.

¹³ Stinnett, Chapter 13.

work stoppages by teachers occurred during the 1968-1969 school year. It noted that the strikes were generally shorter in duration than those of previous years and involved fewer large groups, indicating that teachers in small systems were joining the movement. But it was equally evident by the end of the decade of turmoil that negotiations had become an acceptable procedure throughout the nation and that many boards of education and teacher organizations were settling contractual matters around the conference table in a spirit of social necessity, if not always in one of trust and mutual respect. Nevertheless, teacher strikes are continuing, the present decade opening with a massive, prolonged strike by the teachers of the Los Angeles school district that began in April 1970 and was not settled until late May.

Collective bargaining and teacher negotiations. Strikes, work stoppages, and other types of militancy are carried out through organized action by teacher organizations. But this aspect of teacher activity is a rather recent development, particularly at the intensity in which the strike has been used since 1960. Although the National Education Association (NEA) was founded in 1857 and the American Federation of Teachers (AFT) in 1916, it was not until 1946 that a formal collective agreement between a teachers' organization and a board of education was negotiated. This occurred in Norwalk, Connecticut, in 1946.¹⁴

A group of teachers in the Chicago Public School System organized the Chicago Federation of Teachers in 1897, and it was chartered by the American Federation of Labor in 1902. Undoubtedly this local union had some impact on the salaries and working conditions in Chicago, but there is no record of a formal, negotiated contract between the federation itself and the Chicago Board of Education until the recent developments. It was the Chicago group that primarily was responsible for the formulation of the American Federation of Teachers and the formal affiliation of local teachers' unions, of which some 20 had been established by that date, into a national organization that was officially accepted as a part of the American labor movement.

The major thrust toward collective bargaining began with the successful strike of the United Federation of Teachers, an affiliate of the AFT, in New York City in 1962. The culmination of this strike was the adoption of the first comprehensive collective bargaining agreement covering teachers. The success of the teachers' union in that strike had a dramatic and exhilarating effect on other local unions throughout the nation and spurred the giant National Education Association to action in the area of collective bargaining.

¹⁴ T. M. Stinnett, Jack H. Kleinmann, and Martha L. Ware, *Professional Negotiation in Public Education* (New York: The Macmillan Company, 1966), p. 7.

The NEA at its convention on June 30, 1961, adopted a resolution that called for "professional negotiation." A much stronger resolution was adopted at the 1962 convention, which not only called for professional negotiations between teachers and boards of education but also provided for "professional sanctions," the procedure used by the NEA to force collective bargaining, short of a strike itself. Thus, by 1962 the organized teaching profession through its two general teachers' organizations was committed to collective bargaining, professional negotiations (as the NEA preferred to call the process), or collective negotiations (a term later adopted to combine the two concepts). Moreover, accompanying this demand for collective bargaining was the claim on the part of the teachers' organizations of the right either to strike or engage in professional sanctions, which often, in actuality, turned out to be a strike. At the present time, an informed observer would conclude that there is little real difference between the two teachers' organizations with regard to collective bargaining or the use of weapons such as a formal strike, a walkout, or a simple abstention from work as a means of forcing boards of education to come to a systems-wide agreement with teachers on most, if not all, matters of teacher welfare and teacher participation in policy and decision-making.

Factors conducive to militancy. Factors that gave rise to the rapid increase in teacher militancy in general and specifically to demands for collective bargaining and the passage of laws in a number of states assuring teachers of the right to collective bargaining are the following:

1. Relatively low salaries of teachers generally throughout the United States, particularly in relation to the salaries or incomes of other professional people of comparable education and competency in their chosen fields of endeavor.
2. The relatively low level of financial support often accorded schools in local school systems throughout the nation, resulting in grossly inadequate programs of education for the children of a community, a matter which the teachers themselves were in an excellent position to judge, and, in turn, to demand action on.
3. Shortage of properly certified and qualified teachers during most of the period following World War II until the present time, which accorded teachers a strategic position in their demands.
4. A significant increase in militancy among minority racial groups who had set an example of willingness to suffer the consequences if there was no other alternative to gain their demands; a new political boldness in the profession and a consciousness of political power.
5. An increasing recognition by thoughtful citizens generally that the teacher no longer should be regarded as an undemanding, uninterested member of the body politic (a Mr. Chips) but rather as a well-informed, responsible citizen of the community who was justified in many of the demands made by teachers' organizations.

6. And, partly, as the culmination of these factors and partly as a rude awakening on the part of the citizens, a realization that we could not have good schools taught by competent teachers unless the general status of education in this country was significantly improved; in fact, often there came to be realization by the people that if they didn't do something about the situation in the schools they might not have any schools at all, or at least any schools worthy of the name.

7. Unsatisfactory working conditions gave teachers ample reason for protest. Dissatisfaction resulted from heavy class loads, large classes, extra duties beyond those of classroom teaching—hall duty, lunchroom duty, sponsorship of extracurricular activities and the like; inadequate or nonexistent teaching materials, textbooks, supplies, and equipment; often old, poorly maintained and inadequate buildings and facilities in general; almost complete lack of clerical assistance or assistance of any kind in carrying on classroom instruction, laboratory work, preparation of teaching materials, tests, and the like; inadequate office space or facilities in which to carry on professional work and planning; no opportunity to determine the amount and nature of expenditures for supplies, equipment, and items of this kind; and in general, the feeling of teachers that they are simply at the mercy of an autocratic, bureaucratic system without being involved in decisions about such matters.

8. Frustrations in teaching, the chief one, according to polls of teachers themselves and other evidence, being student behavior and the growing problems of maintaining proper and adequate discipline within the school. Moreover, teachers express extreme frustration over extra demands made on their time, the necessity of carrying out housekeeping and clerical chores that not only take their time but sap their energies in nonprofessional duties, interruptions and distractions of various kinds, reduction of class time because of other school activities that decrease the time available for genuine teaching, and increasing concern about attacks on their person or property, particularly, cars parked in the vicinity of the school.

9. Bureaucratic and rigid control over teachers and the teaching process. Far too many school systems are characterized by a bureaucratic administrative structure that results in rigidity and a highly unwarranted control not only over the curriculum and educational program of the school itself but over the very acts of teaching in the classroom.¹³ A teacher resents this sort of autocratic control, especially in the teaching process itself, in which he obviously ought to be, and usually is, more competent than the administrator or supervisor. The teacher is employed as a specialist in the teaching process, and he justly resents interference and dictation of teaching methods by a non-specialist in the subject, regardless of that person's status in the hierarchy.

10. Method of assignment within the school system. Many teachers have built up strong resentment against the practices of school officials in assigning teachers to specific positions within the school system and in determining the classes or courses which they will teach within the school to which they are assigned.

¹³ For documentation of these conditions in some school systems see John Holt, *The Underachieving School* (New York: Pitman Publishing Corporation, 1969), and previously cited books by Kozol and Kohl.

This list may seem long and unnecessarily negative; it could convey the impression that teachers are dissatisfied with their jobs and highly resentful of the manner in which the schools are administered. We should add that teachers generally are proud to be teachers; they want to teach, and they are happy to be members of the profession. But we must recognize that teachers today, collectively and individually, are a different kind of a professional group than they were in the past. They are not content to be meek, demure, withdrawing civil servants who are presumed to be so engrossed in the profession of teaching and so dedicated to it that they will accept almost any working conditions, salaries, or frustrations in order to be able to pursue their careers.

They still want to pursue their careers, they still want to be members of this great profession, but they are not willing to tolerate conditions which make it difficult or unnecessarily militate against their opportunities to perform in a fully professional manner, or that denigrate them as individuals or subject them to demeaning roles as persons. What they are primarily asking in their militancy and in their demands in collective bargaining sessions is recognition of their status as members of a profession and of their competency to carry on the profession of education.

Negotiated contracts. Items that should be included in collective bargaining agreements when not prohibited by law have been matters of considerable discussion and contention between teachers' organizations and administrators and boards of education. It is not appropriate here to make a detailed analysis of the provisions included in bilateral determination of employment conditions in the public schools.¹⁶

However, it is apparent that, in one way or another, most of the items listed above as causes for teacher militancy would be appropriate subjects for the negotiated contract itself. Many, if not all, of these matters are approved as subjects for negotiations by state law or under the general authorization of state law. If not covered within the state law and not prohibited, then the teachers' organization and the board of education in their bargaining sessions should determine which of these matters would be included in the contract.

Relations with the School Staff

As an "organizational man," a teacher obviously works cooperatively with fellow staff members within the school building itself and with pro-

¹⁶ For those interested in provisions of state laws and of matters that should be subject to collective bargaining, see Thomas P. Gilroy and others, *Educator's Guide to Collective Negotiations* (Columbus, Ohio: Charles E. Merrill Publishing Company, 1969); Fred W. Rausch, Jr., *Analysis of Collective Negotiations Statutes in Public School Employment* (Topeka, Kansas: Association of School Boards, 1968); and Stinnett, Kleinmann and Ware.

fessional persons outside of the building such as supervisory and consultative personnel, the superintendent of schools and his administrative staff, and fellow teachers throughout the system.

Principal. Within the building, the teacher's relationships with the principal are of great importance to him, for it is the principal who is vested with the responsibility for administering and managing the entire enterprise under the general control of central office officials and the board of education. By law, board regulation, or by the traditional concepts of administration, the principal is directly responsible for everything that goes on in the school within the limits of authority vested in him by the board of education and the superintendent of schools. Hence teachers must recognize the status of the principal and his position of authority and responsibility. But principals, as any experienced teacher knows, differ greatly in the ways in which they carry out their responsibilities and exercise the authority granted them by reason of their office. Far too many, particularly in past decades, have acted in the traditional line-and-staff concept of authority, often modeled on the military establishment or industrial enterprises. Under such a concept of school administration, the whole process tends to become bureaucratic if not actually autocratic and high-handed in process and procedure.

But fortunately for today's teacher, this type of administrator has often been superseded by a principal who recognizes the professional stature and competencies of his staff in matters of educational planning and practice, and he is skillful in working with them on a fully cooperative, shared-responsibility basis. He is a leader but a leader of professional people who are fully competent to participate on an equal basis in decision-making, planning, and development of an educational program. This means, in turn, that teachers themselves need not only to be specialists in instructional processes and methods, but also well-informed on professional matters and educational issues and problems.

Building co-workers. Within the building itself, the teacher will, of course, work closely and intimately with fellow teachers. Often there is a departmental structure and he will be a member of the departmental staff in the area of his teaching assignment. The work and responsibilities of the department as a group vary greatly from school to school. In some, the department is largely a paper matter, with neither the department chairman nor the department staff collectively exercising much authority or responsibility for anything connected with the work of the school; in other schools the department is the basic unit in curriculum and instructional planning, with the department head serving as a very important personage in the development of the educational program in that particular area or field of instruction. In such instances, the department chairman often is released from teaching responsibilities from one-third to

one-half or even three-fourths of the time so that he can more effectively carry out his responsibilities in directing staff planning for curriculum and teaching.¹⁷

Within the school the principal may establish an advisory council to the principal or a number of other committees that function in planning and administrative capacities. Again, the effectiveness of these committees will usually depend, first, on the leadership of the principal and the way in which he works with his staff, and second, on the professional understanding, insight, and conscientiousness of the teacher members of the committees.

Board of education. As a member of the staff of a school system, the teacher has only limited relationships with administrators and fellow teachers outside of his own building, unless he is teaching in a small school system in which the entire staff of the district is housed in one building. The board of education is legally responsible for the establishment, operation, and control of schools within a district in accordance with the power, authority, and duties delegated to it by the state legislature, or, in a few instances, broad delegations of power and authority in the constitution of the state. Hence the teacher is legally responsible to and under the direct authority of the board of education. It is the board that has full responsibility for the organization, government, and administration of the schools, working conditions, salaries and fringe benefits of teachers, the establishment of personnel policies that regulate the professional behavior of teachers, and, most significantly of all, the vesting of some of its authority in the person of the superintendent of schools, acting as executive officer for the board itself.

Beyond the mere act of signing a formal contract for employment, the teacher usually has little direct official relations with the board of education. Collectively, the teachers through their local association may bargain with the board of education about matters relating to employment and working conditions, as explained more fully in the previous section.

Superintendent of schools. The superintendent is the chief executive and head of the school system, and his competency as a professional leader, administrator, and executive is a major factor in determining the character and nature not only of the educational program of the community but the employment and working conditions of teachers, the structures and committee organization through which teachers participate in planning, policy-making, and decision-making, and the whole tone and

¹⁷ In an excellent study of outstanding programs of English in secondary schools, James R. Squire and Roger K. Applebee discuss the importance of the departmental staff and the department chairman in developing these programs of superior education: See their report *High School English Instruction Today: The National Study of High School English Programs* (New York: Appleton-Century-Crofts, Inc., 1968).

morale of the professional staff as well as of the students themselves. He is, indeed, a man of many responsibilities and duties, and he must be a person of outstanding attainments and attributes if the schools are to provide a high quality educational program for the children and youth of the community. The extent to which an individual teacher will have direct contact with the superintendent varies greatly, not only in accordance with the size of the system, but in terms of the tone and character of the administration of the schools themselves.

In many large metropolitan school districts, a teacher may seldom, if ever, see or even speak to the superintendent of schools, and certainly he will have little, if any, direct personal relations with him. In fact, in the larger school systems there is usually a district superintendent who is in charge of the schools of an area of the metropolitan district. But even he usually will have a large number of schools under his jurisdiction, and seldom, if ever, will deal directly with individual teachers. In smaller school districts, particularly in those in which there are a small number of teachers such as in small-town and consolidated schools for rural and village areas, the superintendent will be in direct charge of the school itself and will have close working relationships with individual teachers.

The professional people outside of his own building with whom a teacher may work most closely are, on one hand, supervisors, curriculum coordinators, or directors, and, on the other, with a small number of fellow teachers with whom he may serve on occasion on a systems-wide committee that has been appointed to participate in curriculum and instructional planning, advisory groups, and the like. Supervisory and curriculum development personnel of whatever title or responsibility can be very helpful to the teacher and contribute significantly to the teacher's professional success. In most school systems, supervisors and central office staff do not force teachers to consult or work with them, unless a teacher must be helped to protect the educational development of pupils, but rather make themselves available to assist individual teachers, groups of teachers, building staffs, or any other appropriate group seeking their aid and professional help.

The Teacher as a Member of the Social Group

In our consideration of the work of a teacher, we should consider his position as a member of the social group, that is, as a citizen who occupies a special place in society. A large number of studies have been made over the years on the social characteristics of teachers, the relative class structure of the members of the profession, and many related matters.¹⁸ However, rather than bring together information from these types

¹⁸ For an excellent analysis and review of research on this subject, see W. W. Charters, Jr., "The Social Background of Teaching," *Handbook of Research on Teaching*, N. L.

of studies on the characteristics of teachers, it is our purpose to consider briefly the role of the teacher in the social and political life of the community.

The Political Life of the Teacher

In the realm of political activity, two distinct aspects of the teacher's activities are apparent—the political activities of the teacher himself, both as a citizen and as a member of the teaching profession, and the study and discussion of political issues in the classroom.

Until recent years, the political activities of teachers were usually very minimal and, as Charters points out from studies conducted in the 1930s, rather rigidly controlled by the community through social pressures, employment conditions, and the possibility of dismissal. This was more likely to be true in smaller towns and homogeneous communities and cities than in the large urban areas, but, nevertheless, the teacher generally was set apart in a special class with respect to political activities. Not only did the teacher himself usually restrict his political activities, often limiting them simply to casting a secret ballot in elections, but public attitude did not consider political action part of the teacher's role.

In recent years, however, teachers themselves have organized in strong teachers' organizations to bargain with boards of education for salaries, working conditions, and professional duties and privileges, and the situation has changed markedly. It seems evident, although there is no thoroughgoing research on the subject, that citizens generally now quite readily condone and tolerate, if not actually approve and advocate, political activities by teachers. This is an accepted function of labor unions generally as well as of trade and business organizations of all kinds, and the public now recognizes the right of teachers to take active roles in the political arena.

Direct political action on noneducational matters is still avoided by most teachers. Occasionally a teachers' organization or an individual teacher will advocate political action of other types, often in related fields of health, housing, safety, and welfare, but these instances are relatively rare, considering the number of teachers in this country and the strength of their professional organizations. It is in such areas of noneducational endeavors that the community would very likely still resent, and perhaps overtly resist in one form or another, political efforts on the part of teachers to promote social objectives by political means.

Gage, ed. (Chicago: Rand McNally & Company, 1963), Chap. 14; and Harmon Zeigler, *The Political World of the High School Teacher* (Eugene, Oregon: Center for the Advanced Study of Educational Administration, University of Oregon, 1966), for some aspects of the political and social beliefs of teachers.

A second aspect of political activity on the part of the teacher is classroom instruction. Obviously, the teacher has the opportunity, if he chooses and is permitted to do so, to include in his instructional program a consideration of matters that are highly political in nature.

However, it is in this particular aspect of political activity that the teacher is most vulnerable to sanctions or other repercussions. The community regards the school as the protector and transmitter of the values, traditions, and mores generally favored by the citizens. Even to this day, few communities, utilizing social pressures of which they are capable as well as official action by the board of education, permit teachers to include in their instruction the advocacy of personal views on political matters, particularly those on which there exist sharp divisions in views among the citizens themselves. And if there is a large measure of support for a particular position on a matter, the teacher would be even more subject to pressure because the community would not tolerate the teaching of a contrary point of view. Seldom would a teacher be advised to use his class as a forum for advocacy of his own political, social, and economic views.

Teachers do teach highly controversial issues in the classroom, but they themselves have formulated guidelines through their own professional associations and curriculum committees on the approved means of dealing with such issues. These guidelines always specify that the teacher should not advocate a particular point of view and express strong personal convictions, but rather should guide the pupils in an investigation of the issue that explores various points of view and alternatives but does not result in an "official" conclusion as to what action should be taken. Zeigler, on the basis of his study of political activities of teachers, concludes:

Most teachers are conservative, and conservatives are not inclined to disclose personal opinions. The greater tendency of liberals to express themselves counteracts the conservative dominance of the teaching profession to some extent. However, there is no evidence that either liberals or conservatives are anxious to encourage students to undertake critical evaluation of American institutions. . . .

The classroom operates basically to reinforce a belief in the desirability of maintaining the *status quo*.¹⁹

Community Involvement and Social Action

As a member of the social group, a teacher may, and in our opinion, should, become involved in significant activities of various sorts in the community, particularly in social action. The teacher is among the best-

¹⁹ Harmon Zeigler, *The Political Life of American Teachers* (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1967), p. 119.

educated members of the community and it would seem that he has a moral and social responsibility to other citizens to take a role of leadership in community affairs. His role should not be limited to being a Sunday School teacher, a Scout leader, a member of the church choir and the PTA, running a booth at charity bazaars, participating in patriotic observances or civic events of a promotional or entertaining nature, or even being a member of the volunteer fire department. Rather he should participate actively and provide leadership for social action and for community service groups that are successful or promise a large measure of success in the betterment of the cultural, social, and intellectual life of the community. The teacher, by the very nature of his profession, is greatly concerned about children and young people and the conditions in which they live, grow, and develop, and it is appropriate in his professional calling to be active in agencies and projects that hold promise for the enrichment of the lives of the young.

A teacher's profession makes great demands on his physical, mental, and intellectual energies, and, he should choose wisely and even sparingly those agencies and organizations with which he will work and the action projects in which he becomes involved. But certainly, any agency or group interested in the improvement of housing, the full implementation of civil rights for all racial, ethnic, and religious groups, the improvement of health services and hospital care, particularly for infants, the young, and pregnant women, the expansion and development of musical, dramatic, and artistic activities in the community, the protection of consumers, and the provision of legal services and other kinds of services to poverty-stricken families, the poor, and the poorly educated merit the participation of teachers. The assumption of leadership roles in youth organizations, participation in parent-teacher associations, participation in religious activities, and attendance at religious services is not to be minimized.

The teacher, probably more than the members of any other occupational group should exemplify in his own life and in his relationships with other people the great humane traditions of the American people. We are not postulating for the teacher an unwarranted, and certainly not an unbearable, burden but rather pointing out that as a well-educated member of our society and as a person whose profession commits him to the advancement of the life of our nation through the fostering of maximum growth of children and youth, he should commit himself in whatever stand he takes on political, social, and cultural matters to the humane traditions of our nation. To what extent he wants to take an active part in promoting these causes through joining with others in social action groups or agencies or in taking roles of responsibility in any of a vast array of organizations that foster the development of young people and the improvement of community life will be for him personally to decide.

The Education of Teachers for the Secondary School

It seems appropriate in concluding this chapter to consider briefly the nature of the preparatory program necessary to provide the kinds of teachers we have described and advocated in this chapter. Although the educational programs for the preparation of teachers and for their continuing education should be an integrated program planned as a totality, we will use the four major aspects of a teacher's work to discuss the subject.

The Development of the Teacher as a Person

The development of personality and character is a complex and complicated matter and one which educators know little about. Nor do researchers and scholars in personality development understand at all adequately the factors involved in the development of personality and ways in which it can be directed and shaped by other people. This suggests the necessity of establishing a process of selecting candidates for teaching that, while respecting the dignity of the individual, cancels out of teacher-education programs those who appear to have serious deficiencies in personal development.

In the college preparatory program itself, many things can be done to provide a wide range of significant opportunities for teacher-education students to enhance desirable personal traits and to overcome or submerge those that would be detrimental to a good personal relationship with students. Such programs are something far beyond "book learning." A planned program for personality development will need to involve the student in a varied array of significant experiences in relating to and working with other people, in self-analysis, in participation in meaningful and significant projects that provide opportunity for self-involvement and self-discipline, and in projects that enable the individual to react to human conditions, become sensitive to other people and their problems and motivations, and foster a concern for the welfare of mankind. If the teacher is to be an effective person, able to work in the most meaningful and significant relationship with pupils, he himself must achieve self-fulfillment, and, as Maslow terms it, "self-actualization."²⁹

²⁹ Arthur W. Combs, Chairman, *Perceiving, Behaving, Becoming*, Yearbook, 1962. Association for Supervision and Curriculum Development (Washington, D.C.: The Association, 1962). In a later volume on teacher education itself, Professor Combs spells out these basic concepts directly in terms of programs for the education of teachers. See Arthur W. Combs, *The Professional Education of Teachers*, op. cit. Chaps. 5 and 6.

The Education of the Teacher for Professional Service

The major part of the teacher-education program is devoted to the preparation of the student for his duties and responsibilities as a teacher. In all colleges, this program consists of three aspects: (1) the program for liberal or general education; (2) preparation in the appropriate subject matter field or fields; and (3) the program of professional education.

The general education program varies from an often rather meaningless collection of group requirements in specified subject fields to a carefully planned, integrated program that may extend throughout the undergraduate years. Some institutions fall in between these two extremes by providing programs that encompass especially planned courses, seminars, interdisciplinary offerings, field experience in the community, or other types of nonclass experiences designed for teachers.

Preparation in the subject fields which the prospective teacher is preparing to teach is, obviously, a significant part of the teacher-education program. Although the portion of an undergraduate program devoted to study in these selected academic fields or major and minor fields varies somewhat from institution to institution, many state certifying agencies specify at least minimum requirements. At the present time, at least one-third of the total undergraduate programs in most institutions is devoted to the major subject-matter field; it may be as much as half for some, such as the broad field of sciences or the social sciences.

In many institutions, the teacher-in-training takes the same courses in his subject-matter major as do students from other areas of specialization, including those who seek careers as scholars or research specialists in the discipline itself. But in some institutions, special courses in the subject-matter fields are developed exclusively for teachers, particularly at the advanced levels of undergraduate study. The subject-matter preparation of the prospective teacher should be at a high level of scholarship, and his undergraduate work should enable the teacher to keep abreast of the most advanced developments in his field of specialization and provide him with the knowledge, understanding, and insights that enable him to continue to grow as a scholar in that chosen field of study. In fact, we believe that the teacher at advanced levels of study, such as the senior undergraduate year or in the graduate program, should have opportunities to do independent research, carry out scholarly projects and investigations of various kinds, and participate in advanced seminars with opportunities to work with the top scholars of the institution. Throughout his career, the teacher should be provided with opportunities to engage in scholarly study and investigation, working in association with renowned scholars in the field.

The professional preparation of teachers varies considerably from

institution to institution in quality, comprehensiveness, and structure. Some institutions provide only a minimum number of courses, often specified by state law or regulation for certification, with a minimum amount of classroom experience as a student teacher. Those institutions that have developed a well-integrated, comprehensive program of professional education provide not only a substantial body of educational theory, concepts, principles, and knowledge needed by the teacher but also extensive experience in working with pupils in classroom situations, community activities, and various other types of relationships. In some instances, the teacher—after opportunities for field experience of various kinds in the four undergraduate years—may have a fifth year of professional preparation in which he serves as an intern in a cooperating school system.

One basic purpose of the professional aspect of the teacher-education program is to provide:

- (1) The specialized knowledge and understanding needed to carry out insightfully and effectively all of the responsibilities discussed earlier in this chapter
- (2) A body of theory and principles about the instructional process, learning, and curriculum planning
- (3) A conception and a philosophy of education that is consistent with this body of knowledge and theory on the one hand and on the other with the nature of the times in which the instruction of pupils is occurring
- (4) The basic concepts that enable the individual to continue to grow and develop in professional skill and competency

Another aspect of the program for the professional preparation of secondary teachers is to provide ample opportunities for the student to acquire the skills and competencies, insights, and experience necessary for carrying out his responsibilities for planning, interacting with students, and evaluating the instructional program. The major portion of the professional training program is encompassed in the student-teaching experience. This usually constitutes one-third to one-half of the professional education program at the undergraduate level or at the first level of certification if it includes a fifth year. The student-teaching experience is the most significant and most vital part of the program, and necessitates the utmost in planning, organization, and direction by the faculty of the institution and by cooperating school systems.²¹ Observation and field laboratory experiences of various kinds are often included in the professional program prior to the student-teaching experience itself.

²¹ In his widely acclaimed *Charles W. Hunt Lecture on the education of teachers*, Fred T. Wilhelms sharply criticized the typical program of student teaching, and then laid out a broad plan for the improvement of this significant part of the program of teacher education, *Realignment for Teacher Education* (Washington, D.C.: The American Association of Colleges for Teacher Education, 1970).

Development of the Organizational Man

Specific programs at the preservice level for the development of understanding and competencies needed to carry out one's organizational responsibilities as a member of the profession are usually quite limited. Most teacher-education institutions include in an appropriate course information about professional organizations—their purposes, structure, activities, and the like, but organizational matters usually are treated quite sparingly.

Much more significant are the "extracurricular" activities to promote professionalism among teachers-in-training. Many institutions have organized a student affiliate of one or more professional organizations, although seldom does the American Federation of Teachers establish such an affiliate. The National Education Association sponsors a student affiliate called the Student National Education Association, and this student organization is usually affiliated also with the appropriate state teachers' association. On many campuses it is an active professional group, giving students firsthand experience in organizational activities and providing them with literature and information about the work of the parent organization. Other professional groups have campus chapters scattered throughout the country, but these are usually specialized groups designed to serve only a segment of the student candidates.

Development of the Teacher as a Member of the Social Group

On many campuses, any formal effort to contribute to the preparation of teachers-in-training for their roles as members of the social group is a part of the total program of general education, or assumed simply to result from elective courses the student may select or his own campus activities outside the formal program of the college. But some institutions do have planned programs for the advancement of the social development of candidates for teaching. They are aspects of the total program of professional education, but the college makes certain that included in this total program are various kinds of experiences, activities, and courses that will contribute to the social insights, understandings, and concerns of the students.

Courses in black studies, urban affairs, or specific aspects of urban problems are examples of such efforts. Similarly, all sorts of courses dealing with problems of the nation and the world—such as pollution, war and peace, international trade, assistance to underdeveloped countries, famine and food supply, population explosion, resource development, and exploration of space—would obviously contribute to a teacher's preparation to be an effective member of society. Probably the best endeavors of this

kind are in those institutions that provide interdisciplinary seminars and in-depth studies in a tutorial type of program.

In addition to formal course work of many types and kinds, the teacher-in-training should have ample opportunity to participate in civic activities, community development projects, and campaigns for matters requiring political action by the university itself, the city council, the state legislature, or the Congress of the United States.²² Participation in the activities of organizations that are devoted to the improvement of life in the community or in providing assistance to people in need of outside help, community studies and surveys, field trips of all sorts, not only in the community but elsewhere in the state and nation, intersemester short-term projects of civic and social action or similar projects during the summer months would also be highly valuable preparation for this aspect of the teacher's career.

The Total Program of Teacher Education

We have briefly outlined what we consider to be the most important aspects of a total program of teacher education. In light of our presentation and recommendations, it should be evident that the program of teacher education is a very important responsibility of collegiate institutions in this country. To foster the development of high quality programs, the institutions have established a national accrediting agency known as the National Council for the Accreditation of Teacher Education (NCATE), which has endeavored during the past decade or so to establish standards for accreditation. The Council has contributed significantly to the advancement of teacher education programs in this country, but it is, nevertheless, limited in its authority and power, for at no place in the United States has it a legal basis for enforcing its standards; it is solely dependent on action by state certifying authorities or on the prestige value of accreditation to bring about reforms in teacher education.

Most important in the improvement of teacher education in this country, in our opinion, is the extension of the preservice program to a minimum of five years of collegiate work. We would strongly recommend that it become a minimum of six years as soon as feasible and, in due time, a minimum of seven years. If the preparation of people in other professions, particularly medicine, dentistry, law, architecture, and engineering requires five- to ten-year programs, surely the preparation of

teachers should require a program of this extent and scope. By a five-, six-, or seven-year program of teacher education, we mean a correlated, integrated program planned as a whole for the preservice education of teachers, not a program in which the preservice is only the first part of a professional training program and the additional years constitute graduate study on an inservice or postcertification basis. In our opinion, regular professional certificates should not be issued until the candidate has finished the basic program as a unit.

Additional Suggestions for Further Study

1. Burdin, Joel L., ed., *A Reader's Guide to the Comprehensive Models for Preparing Elementary Teachers*. Washington, D.C.: American Association of Colleges for Teacher Education, 1970. All nine models prepared by various professional colleges and agencies for the preparation of elementary school teachers have been summarized in this volume. Although the plans were prepared for elementary level preparation, they are very useful in developing programs for the education of secondary school teachers.
2. *The Education Professions: A Report on the People Who Serve Our Schools and Colleges*, 1968, U.S. Office of Publication No. OE-58032. Washington, D.C.: Government Printing Office, 1969. The Commissioner of Education was required by legislation passed in 1967 to report annually on the status of the education professions. This is the first report. Statistical information is included on teacher supply and demand. The report includes chapters on the preparation of teachers for many types of specialties and on the work of teachers in these areas of service. Presumably, similar reports will be published annually.
3. Perry, Charles R., and Wesley A. Wildman, *The Impact of Negotiations In Public Education: The Evidence from Schools*. Worthington, Ohio: Charles A. Jones Publishing Company, 1970. Analyzes in detail the impact of bargaining on teachers' salaries, working conditions, and professional matters. A comprehensive treatment of bargaining and its ramifications.
4. Smith, B. Othanel and others, *Teachers for the Real World*. Washington, D.C.: American Association of Colleges for Teacher Education, 1969. This report calls for a change in the program of teacher education. It resulted from earlier studies by a committee concerned with teaching the disadvantaged; from those deliberations it was evident to the committee that teacher education must be reformed if the kinds of programs needed in our schools are to be developed.
5. Stinnett, T. M., ed., *The Teacher Dropout*. Itasca, Illinois: F. E. Peacock Publishers, 1970. A Commission of Phi Delta Kappa, a professional fraternity, explored the critical problem of teachers leaving the profession. The factors causing dropout and recommendations for reducing it are considered.
6. Trump, J. Lloyd (chm.), *A Symposium on the Training of Teachers for Secondary Schools*. An I/D/E/A Occasional Paper. Melbourne, Florida: Institute for Development of Educational Activities, Inc., 1970. A group of 20 teachers and other educators discussed the kinds of changes that should be made in training programs. Ten recommendations for changes are made, and Dr. Trump concludes with a position paper on teaching.

PART **II**

THE CURRICULUM
OF THE
HIGH SCHOOL

The period since about 1957 has witnessed more change in the high school curriculum than had occurred in at least 40 years before—perhaps longer. It is only since 1957 that the "new" curriculum content (see Chapter 7) has been developed and reflected in instructional materials and instruction. Only as the 1970s approached were earlier proposals and experiments regarding such organizational innovations as described in Chapters 8, 10, and 11 coming to be really implemented in high schools.

Before turning to the newer curriculum and instructional practices, we review in Chapter 6 the elements of the high school curriculum as still found in most high schools in 1971—elements that had long existed, and in many high schools without much change. Chapters 7 and 8 describe the more recent and forward-looking curriculum changes. Following Part III with its treatment of instructional practices and innovations, a final chapter (12) is devoted to a description of the high school of tomorrow, as the authors would have it be.

In Part II, then, the reader has an overview of the high school curriculum as it generally is and almost universally has been; a description of the changing knowledge component of the curriculum as it is being affected by the knowledge revolution and the national and other curriculum development projects; and a view of the changing and developing emphasis on the individual student's own curriculum.

As we see it, student unrest in high schools is somewhat a reaction to past inflexibility of the high school, as perhaps revealed by our description of the predominant curriculum patterns in Chapter 6; the major solution emerging—well underway before the high school revolutionaries appeared—is a new concern and provision for change in the program and concern for the individual—described in our Chapters 7 and 8. The high school program of tomorrow, as presented in Chapter 12, would represent a fully developed effort to make the high school a significant instrument of social change and individual welfare.

CHAPTER 6

The High School Curriculum Today (and Yesterday)

Part I of this book described the social and educational milieu in which the need for change in the high school arose and, indeed, in which some change did occur. However, the basic pattern of the high school curriculum that was set by the end of the first two decades of the twentieth century persisted for 50 years. By the early 1970s, much change was underway and much more anticipated.

Before turning in Chapter 7 and most of the following chapters to the curriculum and instructional innovations of the recent past, present, and future, we should first describe the high school curriculum as it still exists in the early 1970s in most high schools.

Readers who wish to read critical evaluations of the curriculum in addition to those we make in Chapter 6 should turn to the references cited at the end of this chapter. For example, the sources edited by Birmingham, Divoky, and Libarle and Selengson include many high school students' evaluations. Curriculum innovations are described in our Chapters 7 and 8 and also in several references cited at the end of this chapter and the others; see the Cawelti and the Trump and Miller sources, for example. Additional sources of these types are also cited in several footnotes.

Toward Comprehensiveness

Clearly, the traditional high school curriculum has been highly academic with preparation for further academic study the dominant emphasis. The American ideal of a comprehensive high school serving the educational needs of all its pupils, whether terminating or continuing education thereafter, has never been fully achieved and continues to be rejected in practice in school districts supporting or establishing specialized schools for vocational education or other purposes. The ideal was well

stated by John W. Gardner in the foreword to James B. Conant's widely accepted 1959 report, *The American High School Today*:

The focus of Mr. Conant's study is the "comprehensive" high school—a peculiarly American phenomenon. It is called comprehensive because it offers, under one administration and under one roof (or series of roofs), secondary education for almost all the high school age children of one town or neighborhood. It is responsible for educating the boy who will be an atomic scientist and the girl who will marry at eighteen; the prospective captain of a ship and the future captain of industry. It is responsible for educating the bright and the not so bright children with different vocational and professional ambitions and with various motivations. It is responsible, in sum, for providing good and appropriate education, both academic and vocational, for all young people within a democratic environment which the American people believe serves the principles they cherish.¹

In the late 1950s the chief threat to the comprehensive high school had been the sentiment expressed by Admiral Rickover and others favoring the establishment of selective academic high schools somewhat along the lines of the European secondary school and a few such schools in American cities, for example, New York City's Bronx High School of Science. Dr. Conant's report clearly opposed the establishment of additional such schools:

The improvement of the comprehensive high school would seem to offer far more promise for the improvement of American education than the introduction of selective academic high schools into communities where, hitherto, they have not existed.²

In the 1960s, the issue became increasingly one of whether vocational education could be satisfactorily provided in the high school. Conant had also expressed his highly influential position on this issue:

My inclination is strongly in favor of including vocational work in a comprehensive high school instead of providing it in a separate high school.³

In his 1967 *Second Report to Interested Citizens*, Dr. Conant reiterated the preceding position, stating that he had not altered it.⁴ However, in this report he did note the grave difficulties in providing adequate vocational programs in many high schools and also the conflicting arguments

¹ John W. Gardner, "Foreword," in James Bryant Conant, *The American High School Today: A First Report to Interested Citizens* (New York: McGraw-Hill, Inc., 1959), pp. ix-x.

² Conant, pp. 90-91.

³ Conant, p. 127.

⁴ James B. Conant, *The Comprehensive High School: A Second Report to Interested Citizens* (New York: McGraw-Hill, Inc., 1967), p. 62.

over what vocational education should be offered in high schools, technical institutes, community colleges, and other institutions. He recognized that increased financial support was essential and summed up his conclusions in this final paragraph:

I hope in the next decade the American people will see to it that public education moves ahead toward a greater equality of opportunity. It is clear that a secondary school with a favorable staff-student ratio can provide effective guidance and rich programs suited to students with diverse interests and varying abilities. Once the significance of well-supported comprehensive high schools is fully grasped, I believe support will be forthcoming. Under such conditions these characteristic American institutions may well prove to be the most powerful instruments for the rapid improvement of the education of all the nation's youth.⁵

These positions of Dr. Conant have been cited because they are believed to have both reflected and somewhat solidified the opinion of educators and boards of education, especially with regard to specialized academic high schools. As education moves into the last decades of the twentieth century, however, some conflicting ideas are not resolved as to the locale of the changing curriculum. In the first place, it seems very clear that the public high school more than ever is expected to provide equal educational opportunity for all of its students and that equality means diversity rather than uniformity of curriculum offerings. Thus, each school district must make as certain as its resources permit—even to the point of combining resources with other districts in cooperative programs—that each student may have a program of studies, activities, and services relevant to his previous educational experience, to his present educational needs, and to his plans, hopes, and potential for the future. In the second place, many factors accentuate the need to postpone specialized education of vocational and other types: increasing knowledge, later employment, needs of individuals from limited backgrounds for more compensatory education, the costs of special facilities in the multiple school units considered desirable for personalizing education. At the same time, however, many adolescents are not served well by present programs of academic education and for them, postponement of better programs, including vocational education, is resisted. In the third place, new developments toward making education more individualized and attractive are possible and promise eventual marked improvement. But they cannot be made sufficiently available everywhere to make all secondary schools immediately within themselves widely comprehensive.

We would resolve these dilemmas by implementing the following point of view in each school district: the high school should have a comprehensive program to diagnose educational needs of its students. Its

⁵ Conant, *The Comprehensive High School*, p. 82.

program of curriculum opportunities should be as comprehensive as finance, facilities, and staff permit. A counseling service, hopefully tied with educational opportunities available elsewhere in the district, or in cooperative extradistrict centers, or through independent study arrangements operated on a "school-without-walls" basis in conjunction with other educational services (such as television courses; correspondence courses; tutorial arrangements; study privileges in nearby institutions, libraries, museums, and so on; work experience by special arrangement with business, industry, government, and professions) should provide curriculum opportunities outside the immediate school environment. (See Chapter 12.)

In short, then, the view of the authors is that of a comprehensive curriculum—as comprehensive as possible in terms of the school's own program but not limited to it. Full comprehensiveness would be gained by a system of diagnosis of educational needs and counseling of individuals regarding all possible programs to serve these needs. Descriptions which follow of the changing elements of the high school curriculum thus envision the school program as including many educational opportunities that may not be physically located in the school's own classrooms, laboratories, and libraries. Comprehensiveness, we believe, can be attained through connections with educational opportunities outside as well as inside the school.

Elements of the Curriculum

Probably most laymen, students, and even many school people continue to think of the curriculum in its traditional meaning as the subjects included in the direct instructional program, that is, the "program of studies." Some narrow the definition to pertain to the content of a specific subject and speak of the "English curriculum," the "mathematics curriculum," the "college preparatory curriculum," or the "auto mechanics program of studies." Sometimes the written outline (that is, the "course of study") is also called the "curriculum." Although teachers need to understand all of these usages, a more meaningful definition of the curriculum is that of the *program of learning opportunities provided by the school*. Thus, the curriculum of a high school may include:

The direct instructional program, usually organized around subjects or courses and presented in "classes"

Independent studies in a public library

Club programs

Services to community agencies

Relationships of pupils in classrooms and elsewhere

Student participation in school planning and evaluation

Student organizations

School athletics, intramural and interscholastic
 Assembly programs
 Publications
 Social affairs
 Improvement projects for disadvantaged neighborhoods
 Community resources and events to which students are directed
 Radio and television broadcasts recommended by the school
 Trips sponsored by the school
 Counseling services
 Health services
 Other activities and services provided by the school

From the point of view of a particular adolescent, his curriculum includes all activities which are provided, or to which he is guided by the school. Thus it may include activities (for example, scouting and camping) not sponsored by the school but related to certain ones at school. It also includes such experiences as informal relationships between boys and girls in the classrooms, corridors, and auditorium; athletic events, assemblies, field trips, and other activities; and conferences with teachers, counselors, and librarian. It may also include less desirable experiences that some adolescents have in, or as an indirect result of school: failure in school subjects; special tutoring to avoid or adjust for failure; truancy and eventual dropping out of school; participation in student demonstrations and strikes; and unsatisfactory behavior resulting in difficulties at school and even in the community.

These many and varying activities which we include in the curriculum need some classification for the purposes of description and analysis. For convenience, the following classification has been chosen:

The program of studies
 Direct instructional program
 Extrainstructional learning opportunities
 Guidance and special services

Each of these elements is briefly identified below, with appropriate reference to later, more detailed treatment. They are also shown in Figure 10.

The Program of Studies

As described earlier, the school's program of studies is a complete list of the instructional offerings (courses or subjects or classes) of a school. Since some part of the program of studies must be completed for graduation, frequently the total listing is thought of as synonymous with the curriculum. A later section of this chapter describes more fully the program of studies and changes therein offered by American high schools.

The Direct Instructional Program

Regardless of the subject involved, every classroom has its unique part to play in the education of the pupils who sit in it from period to period, day to day, year to year. Varying instructional organizations—large and small groups, laboratory, independent study, and others; the relationship of the teacher with his pupils, their ways of working together; the physical arrangement of the classroom; the kinds of activities that go on—all of these are important in the learning of adolescents. Long after the subject matter studied in a particular class or other grouping may have been forgotten, those who were once class members may still be using the techniques of committee work, the study skills, and the habits of participation in discussion which they learned there. Or they may still be copying others' work, ignoring the courtesies of group discussion, and being the poor learners they were allowed to be in high school. The significant fact to be emphasized and never forgotten by teachers is that the interpersonal relationships of the direct instructional program comprise of an all-important aspect of the curriculum.

We fully recognize the difficulty of separating the "what" and "how" of classroom activity. For purposes of analysis of the high school curriculum, however, we believe it desirable to consider the program of studies (the what) and instructional organization and procedure (the how) as dif-

(The "Curriculum Planned")
The High School
Provides:

(The "Curriculum Had")
The Student
Chooses:

Learning Opportunities

I. Program of Studies —Some Required —Some Elective	Electives (no choice as to the required studies)	I.
II. Instructional Organization and Procedure (varying by subject field and teacher)	Extent and Quality of Participation in Classes and Other Organizations	II.
III. Extrainstructional or Extraclassroom Learning Opportunities	Whether and How To Participate in Formal Activities and Informal Relationships with Other Students	III.
IV. Guidance and Other Special Services	Beyond Required Testing and Counseling, Types of Help Desired and Available	IV.

Figure 10. Elements of the High School Curriculum ("Planned" and "Had").

ferent aspects of the curriculum. Hence instructional organization and procedure are treated in our Part III.

Extrainstructional Learning Opportunities

The concept of the curriculum as the total program of the school really makes incorrect use of the term "extracurricular activities" in connection with activities provided by the school. Thus, all of the clubs, athletics, social affairs, student publications, and other noncredit activities characteristic of the modern high school are as much a part of the school curriculum as are the required and elective classes in English, mathematics, and other subjects. Although many of the activities once offered purely on a voluntary, noncredit, after-school basis have become credit courses included in the program of studies, secondary schools in general still provide a wide variety of activities which are not so included.

Most important to many adolescents are their own interpersonal relations, sometimes directing their activities in the classroom and often dominating their experiences elsewhere in and out of school. It is in these relationships that friendships are formed, that the affective learnings are highlighted, and that student power is generated.

Many of the learning experiences adolescents have away from it are not influenced by the school. It should be noted, however, that adolescents' reading, television viewing, movies, even their baby-sitting and other minor work experiences, may be directed in part by the school. Thus, homework, field trips, out-of-town athletic events occur away from school but are created by school activities. Still other learning opportunities in the community are organized by the school without any particular relationship to the program of studies or in-school activities. Examples are work-experience projects, community surveys, and get-out-the-vote campaigns. The nature and possibilities of these extrainstructional or extra classroom learning opportunities are considered more fully in a later section of this chapter.

Guidance and Other Special Services

A major difference between the modern American high school and its predecessor institution is found in the extensive services now offered to individual pupils. These services are described in a later section.

The Program of Studies

Some data as to changes in the high school program of studies from 1890 to 1961 are provided in occasional national surveys of enrollment by subjects reported by the United States Office of Education. The last

such survey was made during 1960-1961 and reported in 1965;⁶ as of the year 1970-1971, no later complete survey had been made or was in progress. Hence specific enrollment data are lacking to establish trends in the program of studies during the 1960s, although the comparison of the 1949 and 1961 surveys indicates movements on which we can comment from our observations as to their persistence.

The Expanding Program of Studies

The most obvious change in the program of studies during the twentieth century has been its steady expansion as more and more subjects have been added by schools seeking to provide a comprehensive program. Thus, offerings continued to expand from a total of fewer than 800 course titles in 1949 to more than 1100 in 1961. Combining subject titles reduced the 1961 list to 291 separate courses as compared with the 274 reported in the 1949 survey and 206 in the 1934 survey. Of the 291 titles in 1961, 244 were reported by 15 or more states, compared with 194 (of 274) in 1949 and 111 (of 206) in 1934. Clearly, one predominant change in the high school curriculum has been that of adding new courses; furthermore, additional courses are offered by more and more schools in more and more states. Our observation indicates clearly that this expansion of offerings has continued since 1961.

Nature of the Changes before 1950

The accompanying table shows the percentage of enrollment in certain subjects reported in the surveys from 1890 through 1949 and thus the changing popularity (and requirement) of various subjects during this 60-year period in which secondary education became universal in the United States. The fact that approximately one out of each ten youths of high school age was enrolled in high school in 1890 and approximately nine out of ten in 1949 helps to explain many of the changes in interest and requirements of the subjects.

Table 19 shows, for example, the increasing requirement in the twentieth century of English; the establishment of American history as a separate course (from English history); the substitution of general science and biology for the separate natural sciences; the decline in percentage (but not the number) of pupils enrolled in certain traditional subjects; the decline of Latin as the foreign language; and the introduction and popularization of the prevocational courses (industrial subjects, business subjects, home economics, and agriculture). Also reflected in the

⁶Grace S. Wright, *Subject Offerings and Enrollment in Public Secondary Schools*, OE-24015-61 (Washington, D.C.: Government Printing Office, 1965).

Table 19. Percentage of Pupils Enrolled in Certain Subjects
in the Last Four Years of Public Secondary Day Schools,
1889-1890 to 1948-1949

Subject	1890	1900	1910	1915	1922	1928	1934	1949
English	—	38.5	57.1	58.4	76.7	93.1*	90.5	92.9
U.S. history	27.3 ^b	38.2 ^b	55.0 ^b	50.5	15.3 2.9	17.9 0.9	17.3 0.5	22.8 ^c
English history								
World history	—	—	—	—	—	6.1	11.9	16.2
Civil government						6.6	6.0	5.8 ^d
Comm. government		21.7	16.6	15.7	19.3	13.4	10.4	— ^e
Problems of democracy	—	—	—	—	—	1.0	3.5	5.2
Economics	—	—	—	—	4.8	5.1	4.9	4.7
Sociology	—	—	—	—	2.4	2.7	2.5	3.4
General science	—	—	—	1.1	6.9	8.8	13.6	14.6
Biology	—	—	—	15.8	9.1	3.8	1.6	0.9
Botany	—	—	27.4	15.3	9.5	5.1	2.7	1.8
Physiology	—	—	6.9	3.2	1.5	0.8	0.6	0.1
Zoology	—	—	10.1	7.7	7.4	7.4	7.1	7.6
Chemistry	—	—	22.8	19.0	14.6	14.2	8.9	6.8
Physics	—	—	45.4	56.3	56.9	48.8	40.2	35.2
Algebra	—	—	—	—	—	—	30.4	26.8
General mathematics	—	—	—	—	12.4	7.9	7.4	13.1
Geometry	21.3	27.4	30.9	26.5	22.7	19.8	17.1	12.8
Trigonometry	—	1.9	1.9	1.5	1.5	1.3	1.3	2.0
Spanish	—	—	0.7	2.7	11.3	9.4	6.2	8.2
Latin	34.7	50.6	49.0	37.3	27.5	22.0	16.0	7.8
French	—	5.8	7.8	9.9	8.8	15.5	14.0	10.9
German	—	10.5	14.3	23.7	24.4	0.6	1.8	0.8
Industrial subjects	—	—	—	11.2	13.7	13.5	21.0	26.6 ^f
Bookkeeping	—	—	—	3.4	12.6	10.7	9.9	8.7
Typewriting	—	—	—	—	13.1	15.2	16.7	22.5
Shorthand	—	—	—	—	8.9	8.7	9.0	7.8
Home economics	—	—	—	3.8	12.9	14.3	16.5	24.2
Agriculture	—	—	—	4.7	7.2	5.1	3.7	6.7
Physical education	—	—	—	—	5.7	15.0	50.7	69.4 ^f
Music	—	—	—	31.5	25.3	26.0	25.5	30.1 ^f
Art	—	—	—	22.9	14.7	11.7	8.7	9.0

* Includes enrollment in composition and literature.

establishment of physical education and music as credit courses. Certain trends commented upon by authors of the 1948-1949 survey may help further to interpret the tabular data:

.... For the most part, the changes are in the direction of more functional education. They represent efforts to meet life needs of increasingly diverse bodies of pupils. This is not to suggest that high-school pupils were a homogeneous group in 1934. The democratization of the high school began long before that, and the changes reported here are largely continuations of trends which were apparent in 1934. . . .

In many instances enrollments in general courses have expanded while enrollments in more specialized courses have declined. Enrollments in biology have grown greatly at the expense of those in zoology and botany. General science has expanded at the expense of other more specific subjects of science. General mathematics has grown at the expense of algebra and geometry. . . .

In 1949 it was reported for the first time that more high-school pupils were studying Spanish than Latin. Spanish is the only one of the commonly taught languages which gained appreciably during the years 1934-49. Probably this reflects relaxed college-entrance requirements, a concern for activities which seem likely to be of practical use, and the Nation's Good Neighbor Policy.

While the actual enrollments in the historical table are not comparable, in a number of subjects it was possible to make defensible estimates of actual as well as percentage enrollments in all the national investigations carried on since 1915. Percentage enrollments in algebra, geometry, physics, and Latin have shown progressive decreases in all investigations since 1915. However, from 1915 through 1934 the actual enrollments in these subjects were increasing while the percentages were decreasing. During those years enrollment gains in new subjects often

^b Includes ancient history, and medieval and modern history.

^c Data are for U.S. History (advanced) only, grades 10-12.

^d Data are for American government or advanced civics only, grades 10-12.

^e Comparable data for 1948-1949 not available.

^f Enrollment in grades 9-12 estimated on the basis of the percentage enrolled in the subject in regular (4-year) and senior high schools together, applied to the total number of pupils enrolled in grades 9-12 in all types of public secondary day schools. This estimation was necessary because the data did not fully identify enrollment by grade.

Source: Adapted from U.S. Office of Education, "Offerings and Enrollments in High School Subjects, 1948-49," Chap. 5 in *Biennial Survey of Education, 1948-50* (Washington, D.C.: Government Printing Office, 1951), Table 7, pp. 107-108. The original table has this note of general explanation: "When necessary, the subjects reported in previous surveys were either recombined, separately listed, or eliminated (with corresponding changes in the number and percentage enrolled) in a manner to yield as close comparability as possible with the data of the current (1948-49) survey." We have also used certain footnotes that apply to the data included in our table.

obscured the fact that as many youth as ever before were enrolled in a traditional subject.⁷

Continuing Change in the Program of Studies

The table which follows shows the changes in enrollment by major subject fields, grades 7-12, from 1949 to 1961. Note these comparisons:

1. The post-Sputnik emphasis on science and mathematics resulted in substantial increases in the percentage of enrollments in these fields in 1961.
2. Similarly, the drop in interest in foreign language before 1950 was reversed (as a result of the various factors calling for increased use of modern languages), and a substantial increase in percentage appeared in the 1961 survey.
3. The increased percentages of enrollment in English, music, industrial arts, and art are believed to be due at least in a large part to the inclusion of grades 7 and 8 in these data, grades in which there was a steady addition of courses and requirements (including developmental and remedial reading in addition to regular English to help account for more than 100 percent enrollment in English) as the junior high school movement provided additional facilities and courses in these grades.
4. Increasing enrollments noted above were paralleled by decreases in health and physical education, as requirements were lowered in some schools, and in business education and vocational trade and industrial education.

The report of the 1960-1961 survey offers this general interpretation of the changes occurring from 1949 to 1961:

During the period of this survey, education reacted quickly to changes in the culture brought about by the cold war, the defense program and new social developments. It moved from a trend to extend upward the child development concept of the elementary school, which had existed for some 20 years, to what was, in effect, an extension downward of the college program and preparation for that program. From offerings aimed at meeting the needs of individual boys and girls, the secondary school began to emphasize a program oriented to the academic subjects.⁸

It is regrettable that comparable data are not available to reveal clearly whether the emphasis on science, mathematics, foreign languages, and the other trends, 1949-1961, have continued. Our own observations suggest that 1970-1971 enrollment surveys in mathematics and science would not show markedly different data from those of 1960-1961. We believe that the changes within these subject fields were more marked

⁷ U.S. Office of Education, "Offerings and Enrollments in High School Subjects, 1948-1949," Chap. 5 in *Biennial Survey of Education, 1948-1950* (Washington, D.C.: Government Printing Office, 1951), pp. 26-29. We have quoted only a few excerpts regarding some of the trends noted in this report; readers may find the entire document useful.

⁸ Wright, p. 21.

Table 20. Number of Pupils^a Enrolled in Subject Fields, and Percent These Enrollments Are of Total Enrollment of Grades 7-12 of Public Secondary Day Schools: 1960-1961 and 1948-1949^b

Subject Field	1960-1961		1948-1949	
	Number	Percent	Number	Percent
English	12,972,236	110.6	7,098,770	102.8
Health and physical education	12,081,639	103.0	7,794,671	112.8
Social studies	11,802,499	100.1	6,981,980	101.1
Mathematics	8,596,393	73.3	4,457,987	64.5
Science	7,739,877	66.0	4,031,044	58.4
Music	4,954,347	42.2	2,484,201	36.0
Business education	4,667,570	39.8	3,186,207	46.1
Industrial arts	3,361,699	28.7	1,762,242	25.5
Home economics	2,915,997	24.9	1,693,825	24.5
Foreign language	2,576,354	22.0	1,234,544	17.9
Art	2,383,703	20.3	1,219,693	17.7
Agriculture	507,992	4.3	373,395	5.4
Vocational trade and industrial education	344,704	2.9	369,794	5.4
Other instruction or courses	106,467	.9	111,053	1.6
Distributive education	38,363	.3	— ^c	—

^a Total pupil population: 1960-1961, 11,732,742; 1948-1949, 6,907,833.

^b Alaska and Hawaii not included in 1948-1949 figures.

^c Not reported separately.

Source: Grace S. Wright, *Subject Offerings and Enrollments in Public Secondary Schools*, OE-24015-61 (Washington, D.C.: Government Printing Office, 1965), p. 5.

than shifts of interest from one field to another in the 1960s. Press reports in August 1970 indicated some drops in foreign languages.

Greatly intensified interest in remedial courses for the disadvantaged students and in prevocational education and work experience may have caused further proliferation of courses. We suspect that reduced requirements in health and physical education may have been accompanied by percentage decreases in enrollment, although any prediction about increases and decreases in any field during the rapidly changing period of the 1960s is definitely fallible.

Typical Programs, 1961 and 1971

The 1961 USOE survey described the program of a typical twelfth-year pupil as having included in the four years of high school the following:

4 years of English

1 year of American history

1 or 1/2 year of a twelfth-grade social studies course, usually advanced civics

1 year of world history

2 years of science, usually biology and ninth grade general science,

1-3 years of mathematics (1, general math or algebra, and if the latter 1, plane geometry and 1, advanced algebra)

4 years of physical education or health and physical education

Although enrollment data are lacking to substantiate a "typical" (that is, most frequent) program in 1971, observation of the changing high school curriculum during the 1960s indicates that the 1971 graduate's program might have differed as follows from the above:

The year of world history would have been world geography or a combination of world history and geography.

The 2 years of science would have been earth science and biology, with chances good of a third year in the physical science field.

The 1-3 years, probably at least 2, of mathematics would be less discretely divided into the subjects listed above.

A half year or year of typing would have been included.

2 or more years of a foreign language were more likely to have been included than in 1961.

2 or 3 years of health and physical education would be more likely than 4.

Changes in Offerings by Fields

Some salient points of comparison revealed by the national surveys, especially the last one, and other data and observations as to the offerings by subject fields are briefly noted in the following paragraphs. Our treatment here deals only with offerings and enrollments; changes in the structure and content of the subject fields are described in Chapter 7. The fields are named here in the order of their relative rank in enrollments, as of 1961.

English. Although not even considered a respectable subject in early American secondary schools, English has become the most universally required of all subjects. Only in the last year or two of high school, and infrequently here, may a pupil fail to have direct instruction in English (the enrollment in English in grade 12 was 84 percent of the total enrollment in 1961). Three or four units in grades 9 through 12 are commonly required for college entrance, and three or even four for high school graduation. Generally, the required basic courses in English are supplemented by various electives; the 1961 survey combined some 100 course titles from the schools into 29 course titles. The following comment in the survey report indicates the efforts even in 1960-1961, later markedly expanded, to meet such specific student needs as those in reading:

Among the special subjects in the field of English, the largest enrollments were in developmental reading, speech and public speaking, remedial reading, journalism, and dramatics, in that order. When one realizes that registrations in two of these subjects, developmental and remedial reading, were too small to warrant separate reporting in 1949, the effort being made by the secondary school in recent years to improve the reading abilities of its pupils becomes apparent. Developmental reading, which attempts to insure growth in the reading and interpretation of literature appropriate for the grade level, is in effect a skills course. Remedial reading, on the other hand, is geared primarily to pupils whose reading level is 2 or 3 years below their grade placement or mental age.⁹

Although the provision of reading was especially characteristic of grades 7-8 in 1961, later developments in the high school years, 9-12, have included many types of instruction, increasingly individualized, in reading, composition, and speech. Note, too, some other course titles in English suggesting instruction aimed to serve highly individualized needs and interests: advanced placement English, stagecraft, creative writing, how to study, English for foreigners, advanced journalism, debate, college coaching, great books.

Health, safety and physical education. Physical education did not achieve status as a credit subject in high school until World War I had exposed the problem of physical fitness of American youth—an exposure once again publicized by draft rejections in World War II and bringing about increases then in requirements and enrollments. By 1961, the field was second only to English in total enrollment, grades 7-12. Although the percentages of enrollment in physical education alone were approximately the same for 1949 and 1961, that in all courses in the combined fields of health, safety, and physical education declined. Whether the pressure of the Vietnam War and other factors have been sufficient to maintain enrollments in nonrequired physical education is not known.

Two other forces which operated in the 1960s are believed to have increased offerings in this field. Disclosures from the School Health Education Study as to the general inadequacies of health education and mounting concern for sex education stimulated much interest in these fields. The 1961 survey included courses in home and family living as offered in the health, safety, and physical education area in some schools (home economics in others). The second factor is the strong interest of many groups in the driver education program. Both the 1949 and 1961 surveys found driver education offered in all states. The 1961 survey found enrollment in the classroom phase alone in 1961 to be four times the driver-education enrollment in 1949, with slightly more than one-half of

⁹ *Subject Offerings and Enrollments in Public Secondary Schools*, p. 61.

all schools having grades 11 and 12 reporting enrollments in the classroom phase.

Both health education, especially sex education, and driver education have at times been controversial, with some proponents of academic education arguing that these subjects should be taught by agencies other than the high school. Nevertheless, strong demands for a "relevant" curriculum heard in the late 1960s suggested priority positions for programs so intimately related to the problems of American youth and the society in general.

Social studies. Third among the subject fields in 1960-1961 enrollments, social studies continues to be generally required in at least two of the four high school years and universally constant in the previous years. United States history commonly is required as one of the high school courses, and frequently either civics (grade 9) or advanced civics or government (grade 12) the other. However, in 1961 world history was second only to United States history in enrollment, with 69 percent of tenth-grade pupils enrolled, an increase of about 10 percent over 1949. The percentage of enrollment in world geography had also increased from 1949 to 1961.

The social studies field has a great proliferation of elective courses, with approximately 150 course titles reported in 1961 combined into 29 subject titles. The authors have observed no reduction of emphasis in this field since 1961, and believe that the chief changes may have been in the introduction of additional specialized courses in the various social sciences and, especially, in the inclusion of broader content in the major courses as will be described in Chapter 7.

Mathematics. As shown in Table 10, mathematics enrollments increased from 65 percent of the total enrollment in 1949 to 73 percent in 1961. Another set of data for 1962-1963 showed that the total enrollment in mathematics increased 128 percent from 1948-1949 to 1962-1963, a period in which the total school enrollment, grades 9-12, increased only 86 percent.¹⁰ At least one year of mathematics is generally required in grades 9 through 12, and most pupils take two years or more. Schools reported more than 125 titles in mathematics, combined into 13 in the 1961 survey. Even by 1961, the "new" mathematics had been developed far enough to bring about considerable modification of the traditional sequence and grade placement in grades 9-12 of algebra, plane geometry, solid geometry, and trigonometry. The 1960-1961 enrollments included 26,000 eighth-graders in algebra, various combinations of algebra, geometry, and trigonometry, and a growing enrollment in courses formerly reserved

¹⁰ Digest of Educational Statistics (Washington, D.C.: Government Printing Office, 1968), p. 34.

for college: calculus, analytical geometry, and probability and statistics. The publication of several new mathematics programs in the 1960s tended to break down the traditional distinctions still further with the actual sequence of areas differing between the programs. In general, the movement has been toward a unified program in which the distinctions between the traditional subjects disappear and in which students proceed as far as choice and success takes them through a sequence of units rather than separate one- and two-semester courses. Meanwhile, requirements and enrollments are believed to have continued at least as high as in 1961.

Science. The percentage of all high school pupils who were enrolled in science increased from 50 percent in 1934 to 58 percent in 1949 and to 66 percent in 1961. The percentage of increase in total science enrollments from 1948-1949 to 1962-1963 was 104, compared with an 86 percent increase in total enrollment, grades 9-12. We know of no reason to expect any decrease in the percentages thereafter. The impetus toward more science and mathematics beginning in the late 1950s also disturbed the traditional sequence in grades 9-12 of general science, biology, chemistry, and physics. Even in 1961, earth science was beginning to replace general science, biology was being moved down to grade 9, and advanced or second-year courses in chemistry and physics were being introduced. Since 1961 these movements have expanded, with earth science becoming widely available in grades 8 and 9, biology in grades 9 and 10, and chemistry and physics in most high school years. Efforts toward an integration of the science courses have been slower than in mathematics, but by 1971 integration appeared likely to disrupt the traditional year sequences of the usual science courses. Specialized and advanced courses are also widely offered.

Music. Music enrollments in grades 7-12 increased in relation to total enrollments from 1949 to 1961; the survey data do not reveal whether this increase occurred at all levels. Some two-thirds of the 1961 enrollments were reported as vocal music (chorus, choir, glee club, small ensembles, and general music), with the majority of the junior high schools offering general music. However, the enrollments in the instrumental music offerings more than doubled from 1949 to 1961. Since 1961 the apparent trends in music education have been toward music appreciation and contemporary music; the effects of these trends on the program of studies is not known but they would not seem to suggest decreased offerings or enrollments.

Business education. Although 1961 enrollments in business education amounted to 57 percent of the total enrollment, grades 9-12, this does not mean that over half of all high school students were enrolled, since many students in this field take two or even more business subjects simul-

taneously. The most popular course was typing, with first-year typing being taken by a number that was more than half of the ninth grade enrollment. Bookkeeping, shorthand, and general business followed in order but with an aggregate enrollment far less than that of typing. Some 70 course titles were listed in the 1961 survey, combined into 24 in the report. The survey separated the various courses into general business subjects (nonvocational) and office education (vocational) with their respective percents of the total enrollment in grades 9-12, as 39.3 and 17.5.

Developments since 1961 have included increased federal aid for office occupational training and increased attention to data processing. These developments have involved the creation of new courses in some schools as well as the reorganization of existing ones. The effects on enrollments are not known, but with continuing efforts of high schools to teach all students how to type, one would expect comparative enrollments as presented above to have increased or at least remained in the same position.

Although accounted for separately in the USOE survey, distributive education (merchandising occupations) is seen by us as an aspect of business education. This federally supported work-study program grew in enrollment from 1949 to 1961 at the same pace as the general high school enrollment. This program was given increased support by the federal legislation of the 1960s to try to reach students who might otherwise drop out of school. Increasing offerings and enrollments seem highly desirable in view of the ever-growing need of modern business for competent workers in this field, and the intrinsic interest of the work-study program for many students.

Industrial arts. Although an elective subject, industrial arts registrations in grades 9-12 in 1961 represented 23 percent of the enrollees in these grades. Since many of the courses were half-year ones, involving two registrations, the preceding figure does not mean that 23 percent of the students actually enrolled in industrial arts. The most widely offered courses were general shop, drafting, and/or mechanical drawing, and metalworking, with over 100 different course titles listed, combined into 27 course titles, many having very small enrollments. Although several experimental and innovative approaches have been developed since 1961, little change in the offerings or relative enrollments seems indicated.

Home economics. Home economics enrollments in grades 9-12 amounted to 23 percent of the total enrollment in 1961 as compared with 24.1 percent in 1949 (again many of these enrollments are for semester courses). Many schools require girls to take a year of home economics. The standard Home Economics I, II, III, and IV courses accounted for the bulk (68 percent) of the enrollment, with relatively small enrollments spread

over the elective courses such as family living, health and home nursing, home management, child development, housing and home furnishings, and consumer education.

Since 1961, home economics seems to have been moving toward more specialized, optional courses, credit and noncredit, short-term and long-term, for boys as well as girls, and also toward more interdisciplinary courses (see Chapter 7). One expects future surveys to show increased offerings and enrollments in courses related to family living, consumer economics, child development, and similar topics. Increased federal support for home economics programs to prepare students for employment in such occupations as child care, laundry and cleaning, food services, and home-related businesses is also affecting the program of studies.

Foreign languages. The 1961 survey showed general increase in the percentage of high school students enrolled in foreign languages for the first time since 1900, as a reflection of Americans' post-World War II and post-Sputnik awakening to our relative illiteracy in foreign languages among other major nations. Latin continued as a popular language, although Spanish passed it in enrollment in 1949, and French in 1961. In 1949, Russian was reported from only one state (Washington); in 1961, from 36 states and the District of Columbia. A 1966 survey by the NEA Research Division of school systems enrolling 12,000 or more students found that Russian was offered in nearly one-third of these systems.¹¹ Other languages not generally offered in high schools which were taught in 1966 included Chinese, Hebrew, Japanese, Arabic, Hawaiian, Norwegian, and Portuguese.

In addition to the earlier trend toward increased enrollment in modern languages, and the continuing provision of additional languages, the emphasis on developing greater proficiency in speaking the language has involved both the change in methodology to be discussed later (Chapter 7) and continuing a language longer than the traditional two years. To this end, languages are introduced earlier (a great increase in offerings in grades 7 and 8 was noted in the 1961 survey) and continued longer. Thus even in 1961 it was determined that 21 percent of the second-year students continued a third year, and that the percent of the students continuing in both a third and a fourth year was greater than in 1949. This trend seems to continue, but local surveys reported in the press during the summer, 1970, indicated that total language enrollments were dropping.

Art. Art is considerably less widely offered than music, with a relatively small number of electives available in individual schools. The separate senior high schools provided an average of 1.7 art courses per school in

¹¹ NEA Research Division, *NEA Research Bulletin*, 45:112 (December 1967).

1961, with only one school in 7 among the 8453 schools enrolling fewer than 200 pupils likely to offer a single course in art. Whether heightened public interest in the arts during the 1960s was reflected in increased offerings and enrollments in art is unknown, but we are inclined to believe that frequent lack of facilities and teachers combined with the pressure of academic course requirements leaves enrollments in this field in relatively low rank among the grade 9-12 subjects.

Agriculture. Despite the continuing movement of the population away from rural areas, enrollment in agriculture in grades 9-12 remained at approximately the same percentage of total enrollment from 1949 to 1961 (with a sharp decrease in grades 7-8 explaining the decline in grade 7-12 percentages shown in Table 10). The offerings in this field were primarily concentrated in 1961 in Vocational Agriculture I, II, III, and IV, with several alternates available in general agriculture courses in some schools. The Vocational Education Acts of 1963 and 1968 made possible considerable change in programs of agricultural education and other vocational fields. These modifications are resulting in new and reorganized courses for work experience and other programs including various agricultural specialities and related shop and laboratory activities.

Vocational trade and industrial education. The 1961 survey reported a decrease both in number enrolled and percentage of total enrollment in this field as compared with 1949. The enrollment analyses in 1961 indicated that 38 students per 1000 in the four high school years, or 87 per 1000 in grades 11-12 where the trade subjects were usually taken, were enrolled in a trade subject. In order of enrollment, these were the trades included: automotive mechanics, machine shop, electricity, printing occupations, carpentry, welding, cosmetology, needle trades, auto body mechanics, and cabinetmaking. These courses were predominantly offered in large schools, with only 25 percent of the total number of course offerings found in the under-500 schools, two-thirds of all secondary schools.

Various developments in vocational education since 1961, especially those embodied in the federal legislation of 1963 and 1968, are bringing major changes in this field. These changes include: provision of vocational education for youth in less populous areas at area vocational schools; movement of highly specialized vocational training programs into technical institutes and junior colleges; provision of new programs for many service occupations; increased variety of work-study programs and part-time occupational training; general courses in occupational orientation. As these changes are implemented, offerings and enrollments in the vocational education fields even in the high schools may be expected to stop declining and probably to increase.

Other courses. The categories under "other instruction or courses" in the 1961 survey report included block-time or core classes, work experiences (not federally aided), group guidance, instruction to special groups (special education), school service activities, teacher training and auditorium. As to the first, block-time or core, the offering was primarily in the junior high school years. Most of the other categories simply reflected the awarding of high school credit by some schools for activities usually included in the noncredit activity program. The current interest in interdisciplinary courses not fitting into the established subject fields is described in Chapter 7. The next section of this chapter deals with the extrainstructional or activity program of the high school.

The Extrainstructional Program

The term "extrainstructional program" (or "extraclassroom program") is here used to categorize those learning opportunities and educational services of the high school curriculum that operate outside the direct instruction program of courses, classes, and other such opportunities directly instructed by teachers and generally carrying credit toward graduation. Groupings of these extrainstructional opportunities and services identified and described in this chapter include:

1. Learning opportunities growing out of direct instruction and representing an extension of the instructional program
2. Learning opportunities in the school organized as "activities" and operating independently of the direct instructional program
3. Learning opportunities in community projects and services that may or may not originate in the direct instructional or activity program but operate independently of either
4. Guidance and other services provided to students on an individual basis

All of these opportunities also provide the situations in which students' relationships with each other may give incentives to increased learning, or perhaps, toward resisting schooling. Students may be helped to use these activities for achieving their own purposes or they may be indirectly influenced to form protest movements. In the aggregate, these activities and relationships probably comprise the high school's best chance to "turn on" students into enthusiastic participants in their own education.

Extensions of the Direct Instructional Program

Any learning activity—homework, independent study, or field trips—carried on as a result of instruction is in a literal sense an extension of the direct instructional program. Our present reference, however, is to

the many learning activities of a noncompulsory nature that may be suggested by either teacher or student in relation to instruction and occur on the student's own initiative without relation to the marking system or organized independent study plans. This concept may be clarified and illustrated by a partial list of the types of learning activities that can occur as outgrowths of formal instruction:

- Serving as a helper in a community or civic project
- Reading a book, periodical, or other printed source
- Viewing a television program
- Attending a movie
- Attending a dramatic performance
- Hearing a public lecture
- Participating in a community improvement project
- Attending a session of a governmental body
- Investigating a question in a library
- Interviewing a person for further information
- Visiting a museum
- Collecting or observing natural phenomena
- Conducting a scientific experiment
- Writing an individual or organization for information
- Creating a literary, artistic, or other production
- Discussing an issue or question with persons outside school
- Auditing a course
- Developing a file of materials for continued reference
- Traveling to some point of historical or other interest

This list can be expanded by the reader to reflect his own ways of pursuing learning in which the direct instructional program may have stimulated interest. This type of stimulation we see as the epitome of effective instruction as described in Part III of this book.

The School's Activity Program

The dividing line between instructional and noninstructional learning opportunities varies somewhat from school to school and frequently changes. Historically, activities coming into the curriculum as extracurricular have tended to become curricular in the sense that they were once noncredit, not necessarily teacher-sponsored, and wholly voluntary. For example, most offerings in music, dramatics, speech, journalism, and physical education came into the program of studies as extracurricular activities, and change in status continues in individual schools. Furthermore, some activities, especially clubs (for example, the Spanish Club), are quite closely related to subject offerings. And some activities are at times so closely directed by faculty members as to have all the characteristics of direct instruction except for the credit-schedule pattern.

But, all in all, the distinction between classes, whatever their size, and activities is a real one, clearly identifiable in a particular school. The activities are more student-directed, less rigidly scheduled, voluntary, and all too frequently, more interesting and important to students, than the classes. They serve at least three important purposes in the high school:

1. Coming into the curriculum as special interest activities, they tend to improve the program not only by their intrinsic interest for some students but by adding zest to the total program, sometimes developing procedures which influence other activities and even classes, and frequently becoming an established part of the program of studies.

2. They provide opportunities for developing and extending special interests, sometimes relating to vocational choices and, in most cases, to leisure-time pursuits, and thus serve curriculum individualization purposes especially well.

3. They aim to give students practice in directing their own affairs and thus offer excellent opportunity for citizenship education in the selection of leaders, management of organizations, development and execution of group plans, and other democratic processes.

The following paragraphs briefly identify and describe major categories of activities with a concluding analysis of some related curriculum problems and issues.

Assemblies. The school assembly is one of the oldest and perhaps the most common of all extrainstructional activities. It is the one experience that all students in some secondary schools have together, although crowded facilities, lack of an auditorium, or lack of one large enough for the entire student body restricts assemblies in some schools.

We see the assembly as an excellent opportunity to present programs developed by students, to bring all students some outstanding cultural, entertainment, or other educational program, and to consider matters of institutional policy. Here well-planned and well-managed democratic procedures can give students the opportunity to express their views as well as to hear those of others, and here decisions affecting the student body can be explained or debated or made as the case may permit. Student involvement in assembly planning is essential to the achievement of these purposes.

Athletics. Probably the most common, as well as the most widely criticized, activities are those included in interscholastic athletics. Almost every high school has its teams in football, basketball, and baseball, and sometimes other sports that compete with teams elsewhere, frequently on a league or tournament basis. Highly competitive and commercial influences may be controlled to some extent by regulations of the usual state or regional athletic association, but interscholastic athletics are still subject

to criticism because too much emphasis is said to be placed on this one phase of school activity, with various resulting malpractices.

Many schools have experimented with procedures for extending the desirable benefits of athletics and minimizing the undesirable aspects. Most methods aim toward encouraging participation by more high school students. Thus, intramural teams and competition are generally made a part of the intramural program; other sports such as tennis, golf, swimming, and volleyball, are included, several teams being organized in each sport to assist the physical development of a maximum number of students rather than to provide entertainment for spectators.

These efforts to widen participation and improve the program have, as yet, affected too few communities. In many schools, athletics still exist for those most able physically; intramural sports are distinctly second to interscholastic activities in interest and support; marching bands and spectator entertainment activities take undue time of students; and the whole athletic program, except for eligibility rules for players, is operated somewhat independently of the instructional program and purposes of the school. *Clubs.* Clubs and extrainstructional programs are frequently identical; that is, some schools organize virtually all activities as clubs. We see a "club" as a group of students organized by themselves within school policies to work or play together at school on the basis of a common interest. Although clubs might be formed in connection with other activities described in this section, we see them as different and as differing in focus from school to school and also from year to year in the same school. Thus, clubs may be classified according to purpose as follows:

- Curriculum:* Many clubs are organized in relation to the course offerings of the school as a means of providing related social, recreational, and other activities that are considered fun rather than learning. For example, the Spanish Club may have programs of Spanish music and dancing.

- Service:* Usher clubs, pep clubs, library clubs, movie operators' clubs, and similar groups exist primarily to provide services for the school. The term "service club" may also identify a club organized as a junior affiliate of some adult organization.

- Social:* Although fraternities and sororities as secret societies are generally outlawed in public secondary schools, social or service clubs may be sponsored which exhibit some similar characteristics, especially that of an elected membership. The programs of these groups may emphasize both social and service activities.

- National youth affiliates:* Several types of clubs operate on a national basis as organizations generally concerned with character-building and vocational functions, such as Boy and Girl Scouts, Hi-Y, Junior Red Cross, 4-H, Allied Youth, Thespians, Future Farmers, and Future Teachers. Some such groups merely meet in school buildings, but others are directly sponsored by the school.

- Hobbies.* Chess, photography, travel, and many other types of clubs are directly concerned with the development of leisure-time interests.

6. *Honor societies:* Various types of local and national types of honor societies seek to develop and recognize scholarship. Probably the most widely known of these societies is the National Honor Society, sponsored by the National Association of Secondary School Principals.

Contests, fairs, festivals, tournaments. A host of contests, fairs, festivals, carnivals, tournaments, and other activities involving competition and sometimes both fun and moneymaking, may be found in our high schools. Scholastic contests are sponsored by colleges and universities and their departments, as are contests in athletics, speech, debate, music, stock and grain judging, and other activities. Science fairs were especially prominent during the 1960s. Athletic associations widely promote various types of tournaments. Various associations in music, dramatics, debate, and speech sponsor contests of many sorts to exhibit the accomplishments of pupils and teachers. Commercial, patriotic, and civic groups are continuously besieging the schools to conduct essay and poster contests, campaigns, fairs, carnivals, and other programs to promote some interest (usually thoroughly worthy). The requests for these various types of events are so numerous in large centers that many school systems have had to organize screening committees or other procedures to evaluate them; in fact, the National Association of Secondary School Principals considers this problem serious enough to issue an annual list of approved national (defined as offered in seven or more states) contests and activities. And in addition to the many proposals from outside the school, many parent and student organizations wish to use student talent to raise funds through various programs.

Some of these contests and affairs undoubtedly have merit. Boys and girls like to compete and entertain, and well-organized competition and entertainment can be wholesome and stimulating. For example, intercity music festivals and contests may provide band, orchestral, and vocal groups excellent opportunities to demonstrate their competence and, at the same time, provide fine musical programs for youth and adults. If competition is involved, the awards can be made positive and helpful for each group. Properly conducted, contests and festivals may stimulate widespread participation and wholesome motivation of students. However, there are also many dangers and difficulties to be overcome: schedule and time problems; possible expenses; jealousies and hostilities.

Homeroom. Homerooms follow no standard pattern in American high schools. Most schools assign each pupil to one room for such purposes as attendance records and report cards. The length, frequency, and nature of homeroom meetings vary widely. In many cases, the homeroom functions are merely attendance taking, announcements, and distribution or collection of report cards, fees, and so forth. Longer periods are typical of schools having a daily activity period, with one or more of these periods

each week being used for the extended homeroom. In these situations, the homeroom period may be used as a guidance period, for study, or perhaps for a combination of these purposes. In some schools, the daily homeroom period may be as long as 30 minutes or even longer and be either a group guidance or study period. The homeroom is also the basic unit of representation in the student council or other form of student government. It may also have its own social program and intramural teams. These latter purposes can make it a useful educational opportunity.

Public programs. Several of the activities described above may involve performances staged for or open to the general public. In addition, several school activities, especially those in music and dramatics, regularly produce performances for the public. Especially in small communities not having the variety of commercial entertainment found in cities, the high school music concerts and dramatic presentations may be eagerly awaited community events. Furthermore, the band and other school groups are called upon very frequently, sometimes to the point of exploitation, to take part in parades, rallies, and other types of community activities. These programs can provide needed recognition for student performance and a fine incentive for those involved.

Publications. High school publications—newspapers, yearbooks, literary magazines, student handbooks, and special bulletins—constitute a major business enterprise in terms of numbers of people involved. These various publications may, and do, serve worthwhile purposes in our secondary schools. A medium of communication is essential in any organization, and a school newspaper is the common medium of larger schools. Sometimes produced by an elected or volunteer staff and sometimes by the journalism class, the newspaper may be a strong factor in unifying school activities and interests. Through it, information is presented regarding special problems, and polls are taken of student opinion. The newspaper and other school publications give boys and girls the opportunity to develop special interests in writing, editing, and other publishing operations. Annuals and magazines help in developing school morale and provide fine opportunity for creative effort on the part of students. Handbooks and directories are useful in orienting new students in larger schools.

Service organizations. The term "service" organization or club covers several types of activity groups. Thus, the Library Club may be a group of students serving as library assistants. A national prevocational group such as Future Teachers of America may provide services in its field of interest (for example, serving as teacher assistants) and be referred to as a service organization. Many high school groups are affiliated with such community service clubs as Rotary, Kiwanis, and Lions and are also called service clubs. Whatever the basis of organization, if service to the school

or community is a dominant purpose, the group can have vitality and its members can have significant learning opportunities.

Social programs. Parties, dances, and other social activities are usually outgrowths, frequently very prominent ones, of other school activities. Thus, the athletic teams have their banquets, the clubs their parties or dances, the homerooms their parties or picnics. The modern high school provides opportunities for cultivating these social interests in a wholesome fashion. In the usual absence of a student social room fitted for dancing, games, lounging, and similar recreational activities, the gymnasium or the cafeteria can readily be arranged for after-school affairs.

In addition to the parties, dinners, and dances held at school, various after-school, off-campus events are organized by school groups: picnics, camping trips, roller skating parties, hikes, theater parties, dinners, and dances are common. All of these, in addition to the affairs held at school, present many interest-builders for pupils and also many problems for their families and faculties: costs, supervision, time. If these affairs are really to serve as learning opportunities, means need to be found to give interested and capable students major responsibility for planning, financing, conducting, and evaluating them.

Student-directed periods, days, weeks. Increasing indications of unrest among high school students in the late 1960s resulting in school disruptions of various types caused many educators to reflect on the need for more active and responsible participation of students in decision-making and management of their affairs. Already, there was some participation in the activity program, especially in student government, but some experimentation with less restricted decision-making and management seemed desirable. Some models of this type may exist in practices of experimental periods, days, and weeks. In some few schools, there is already considerable experience in the control of student behavior in assemblies, lunchroom, break periods, and other situations by student monitors operating under student government plans. Experience in city government with youth days, when elected youth occupy city offices (usually with the incumbents ready at hand!) might be extended to student days in school, with elected students serving in responsible positions to manage student-developed programs for the day.

A possible model of a student-run week was widely publicized in 1969. For five days students at the Walt Whitman High School, Bethesda, Maryland, conducted its "Experiment in Free-Form Education"—no required classes, no grades, no regular class groupings for 2200 students. This experiment was reported as a "huge success."¹² During the week, 242

¹² *Education, U.S.A.*, March 31, 1969, p. 169. Also see "Free Form Learners," *Nation's Schools*, 84:48-50 (September 1969) for a description of this program, and another one at Adlai E. Stevenson High in Barie View, Illinois.

activities were scheduled, utilizing more than 150 guest lecturers and including various out-of-school work, travel, and study experiences for about one-third of the students.

Student government. The great majority of high schools have some form of student council or other type of student government plan. The plans vary from a clublike or service activity with no real participation in student government to effective plans providing for active student involvement in decision-making and school management. A 1968 publication of the National Association of Secondary School Principals was highly critical of student councils in general because of their composition and functions. The author, Allan A. Glatthorn, urged that the councils be made more representative of the total student body and given more significant jobs than fund raising, as for example: conducting remedial classes in a disadvantaged neighborhood, refurbishing a community center, setting up a city-suburb exchange program, arranging a lecture series or student-led seminar on contemporary issues, suggesting criteria for evaluating teachers, creating a proposal for hiring teacher aides, and recommending new courses or changes in teaching methods, the school day, vacations, disciplinary policies, or grading.¹³

Travel-study. Travel tours in the state and to Washington, D.C., and other notable out-of-state centers have long been popular culminations of earlier aspects of high school studies. Even trips of athletic teams, bands, and other school groups for games, parades, and other purposes can be scheduled and directed to yield significant learning opportunities. Recently, travel-study plans are giving limited numbers of high school students the opportunity to combine study, travel, and living abroad. Some 30,000 high school students traveled abroad in the summer of 1969, mostly to Europe. The tour arrangements include housing the students in a university or secondary school where they may study a foreign language or other subject. High school teachers accompany the students and assist in the instruction and the tours to various points in Europe.

Some problems and issues. We see the extrainstructional program as having great potential for serving the educational needs of adolescents, and heartily hope its benefits can be fully achieved in the high school of the future. Certain problems and issues must be solved and resolved, however.

In the first place, participation in the activity program varies inversely with the size of the school. Unlike the program of studies, the program

¹³ See Allan A. Glatthorn, *The Principal and the Student Council* (Washington, D.C.: National Association of Secondary School Principals, 1968).

of activities seems to fare better in small schools. Perhaps, due in part to the relative paucity of formal offerings, the activities are very popular in smaller schools. For example, one of us found, in surveying the situation in Colorado in 1967, that the percentage of the total school enrollment participating in activity programs was over 100 percent (because some students were enrolled in more than one activity) in school districts enrolling less than 500 but barely over 50 percent in districts enrolling over 10,000 students.¹⁴ Kleinert's study in Michigan had similar findings: ". . . in the larger schools studied, an average of only 32 students per hundred participated in one or more activities; whereas 76 per hundred did in the small schools and 49 per hundred did in the medium-sized schools."¹⁵ Kleinert blamed this situation on the failure of the large high schools to help the average individual student identify as personally with the school and its activities as the smaller, and also on the general lack of evaluation of the activity program and the tendency to neglect this program of recent years because of academic pressures. We ourselves believe many factors responsible—those just cited plus perhaps more transportation and work conflicts in the city—and agree that serious efforts should be made to make the benefits of the activity program much more widely available in larger schools. Decentralized school organizations, more personal counseling, care in scheduling, more representative student leadership, elimination of any costs to students are seen as some efforts needed to secure wide participation of students in larger high schools.

In the second place, there are problems of balance in the student's program when the activity offering is comprehensive. How many activities? How much time? Although students do get overinvolved in activities, sometimes at the expense of their studies and/or health, we see the under-involvement of students who realize very little value from their schooling in general as even more serious. Counseling of both types of individuals in regard to the selection from plentiful options seems to be the best answer. Such counseling must be informed about the activities and their values as well as about the needs of the counselees. Balance is essentially an individual matter, and wise individual counseling should be very helpful.

Thirdly, there is the perennial problem, usually neglected, of evaluating the activity program. Activities get out of balance with each other and with instruction. Some remain in the program because of teacher rather than student interests, and public interests in the entertainment or commercial value of some activities may tend to force their continuance. At a time when many adolescents are seeking—in ways some adults find

¹⁴ Kimball Wiles and others, *Colorado Education at the Crossroads* (Denver: Colorado Department of Education, 1967), p. 66.

¹⁵ E. John Kleinert, "Effects of High School Size on Student Activity Participation," *Bulletin of the National Association of Secondary School Principals* 53:37 (March 1969).

undesirable—to express their disillusionments, dissatisfactions, and dissidence about the adult society, student activities could be more fully turned over to them as projects in which they can take major responsibility and have the opportunity for self-expression many seek. Faculties need to determine whether such frequent criticism as the following is valid:

As a matter of fact, it would seem that many of our school administrators and faculty are intent upon a student activity program severely limited to those few students who have learned to conform to and live with the administrative-faculty hierarchy. Student activities, in many schools, have become the "ice cream" used to reward students when they have been able to eat the classroom "spinach." To some educators student participation in activities is clearly contingent upon classroom success plus social adjustments and, in some cases, a high-income family background. Those students allergic to classroom "spinach" and those who reject the social "carrots" are too often relegated to the group sometimes called the silent majority who assume the role of passive observing participants in student affairs.¹⁶

The problem posed by this quotation seems central: to solve it, each interested school faculty needs to set forth carefully the objectives to be sought in its activities program, gather such evidence as possible, especially from the students, as to the achievement of objectives, and make such modifications as indicated by the evidence. This process needs to be maintained on a continuing basis for the activities program to be continually so updated and responsive to student needs as to be generally recognized as a significant element of the high school curriculum.

Community Projects and Services

High school curriculum developers have long recognized, but less widely implemented, an integral relationship of school and community. The curriculum of every school reflects, to some extent, the characteristics, resources, and expectations of the community from which its students come. At times and in some areas, the concept of a community school has flourished. For example, in the Depression years preceding World War II, many schools in the South became centers of community enterprises such as food preservation, sewing and tailoring, furniture repair, child care, and adult education.¹⁷ More recently, attempts to improve life and education

¹⁶ D. I. Wood, "Are Activities Programs Really Activities Programs?" *School Activities*, 39.8 (September 1967).

¹⁷ See for descriptions of the community school concept: Samuel Everett, ed., *The Community School* (New York: Appleton-Century-Crofts, Inc., 1938); W. K. McCharen, *Improving the Quality of Living A Study of Community Schools in the South* (Nashville: Division of Survey and Field Services, George Peabody College for Teachers, 1948); National Society for the Study of Education, *The Community School*, Fifty-second Yearbook, Part III (Chicago: The University of Chicago Press,

in the inner city have included various programs of adult education, recreation, and welfare services centered in school buildings. The several applications of the concept of the school as a center of community activities may involve high school students in these enterprises, although the services can, and sometimes do, operate quite independently of the school program.

Certain emphases on the local community appear in the direct instructional program: the use of community resources in studying many subjects and also the direct study of the community itself, usually as a part of the social studies instructional program. Table 21 illustrates the possibilities of use of the community as a laboratory for information and experience on problems related to one widely used classification of the educational needs of youth.¹⁸ Our view of full use of the community in the high school of tomorrow is presented in Chapter 12.

The community is also a resource and a potential beneficiary for many extrainstructional activities. Thus, it is mostly in the community that students find the opportunities listed earlier in this chapter for their own independent extensions of direct instruction. It is also to the community that they may turn for many relevant learning opportunities—that is, opportunities which relate to current social problems, to the needs of youth for engaging in responsible and productive social action, and to their desire for some control of their own activities. Some examples of such opportunities follow.

Human relations workshops. Student human relations workshops begun in 1966 on a small scale in Los Angeles city junior and senior high schools involved 35 high schools in the next two years. The workshops aimed to improve human relations in the schools through discussion groups involving students, teachers, and citizens. Sponsoring teachers had 15 hours of training in human relations and group dynamics in Saturday training sessions. Discussion groups and in-school and out-of-school projects involved racially and socially mixed groups in discussion and recreation.¹⁹

Youth-generated projects. An analysis of means of avoiding "the coming

1953); Edward G. Olsen, ed., *The Modern Community School* (New York: Appleton-Century-Crofts, Inc., 1953); and Whilden Wallace, James Chretzberg, and Verner M. Sims, *The Story of Holtsville* (Holtsville, Alabama: The authors, 1944).

¹⁸ The "ten imperative educational needs" were first presented in Educational Policies Commission, *Education for All American Youth* (Washington, D.C.: National Education Association, 1944), pp. 225-226, and republished in the revised edition, *Education for All American Youth: A Further Look*, 1952, p. 216. The statement of needs has been widely used and cited in secondary education since first publication, although various other groupings and listings we cited in Chapter 4 have also appeared subsequently.

¹⁹ Philip Zwerdling, "Student Human Relations Workshops," *Journal of Secondary Education*, 43:74-87 (February 1968).

Table 21. The Community as a Laboratory

<i>Educational Needs of Youth</i>	<i>Some Related Problems</i>	<i>Some Sources of Information and Experience in the Community</i>
1. Salable skills	Available occupations	Chamber of commerce; employment service; occupational surveys
	Working conditions	Labor organizations; industrialists
	Work experience	Local industries, businesses, professions
	Specific training	Local industries, businesses, professions
2. Health and physical fitness	Health practices	Health department; medical societies
	Available health services	Health department; hospitals; clinics
	Facilities for fitness	Public parks and recreational facilities
3. Citizenship	Government services	Local government officials; courts; municipal utilities; public institutions
	Government and political organization	Local governing groups; political parties and leaders
	Civic obligations	Elections, tax boards, taxpayers' associations
4. Family life	Successful marriage	Divorce courts; social workers; churches
	Child care	Welfare agencies; nursery schools; homes for children
	Homemaking	Housing projects; markets; surveys
5. Consumer problems	Purchase of goods, services	Consumer and credit organizations; markets
	Use of goods and services	Consumer organizations, demonstrations
	Budgeting	Banks, consumer organizations
6. Science	Conservation of resources	Farms, forests, mines, naturalists
	Electricity and power	Power plants, dams, industries
	Pollution control	Engineers, industrial, city
	Social effects of science	Psychologists, sociologists, health department

Table 21. The Community as a Laboratory (continued)

<i>Educational Needs of Youth</i>	<i>Some Related Problems</i>	<i>Some Sources of Information and Experience in the Community</i>
7. Aesthetic ap- preciation	Literature	Theater, libraries
	Art	Museum, exhibits; architects, ar- tists
	Music	Concerts, opera, radio stations; musicians
8. Leisure activities	Nature	Outdoors; nature clubs; natural- ists
	Available activities	Commercial facilities; public fa- cilities; television
	Evaluating activities	Censorship agencies; special in- terest groups
9. Cooperation	Cooperating organiza- tions	Youth and community councils; churches; labor, industrial, business groups
	Intercultural problems	Interracial groups, interdenomi- national organizations, immi- gration office
10. Communi- cation	Agencies of communi- cation	Newspaper offices; radio and television stations
	Participation in groups	Forums; youth groups; civic clubs
	Effective listening	Public lectures, forums, panels

revolt of high school students" suggested such problems, solutions and principles as follow:

The central problem is how to get teen-agers to generate and carry out programs by themselves. . . . A Youth Studies Center at the University of Southern California experimented with projects designed to involve youth in community problems affecting them. Some of those experiments, for example, utilized employment services operated by and for teen-agers.

The Crenshaw, California, program is another example of a community study seminar organized by teen-agers to learn about their community and how to meet its needs. Still other teen-age youth are active in tutorial programs with their less-advantaged fellow students. When the Seattle school levy was in jeopardy, high school students there organized a vigorous campaign of support, demonstrating that youth can be involved in community action.

To be attractive to young people, it seems that a project must have

inherent interest to them, and must offer full partnership in the adult world. Teen-age youth do not tolerate participation with or supervision from adults who are distrustful, patronizing, or who appear to be reliving their own adolescence. . . . We must not only permit but also encourage them (youth) to work on more real social problems and to experience these directly. They must have more opportunity in school to discuss freely any topic that concerns them—no matter how controversial or innovative. All instructional activity must be examined for meaning and relevance to the real world of teen-agers.²⁰

In the early 1970s many high school youths were vitally concerned with such problems as United States involvement in Vietnam, racial injustice in the United States, and problems of population and environmental control. Many youths were participating in antiwar demonstrations, Earth Day observances, and similar movements. Their interest and participation can be capitalized upon, we believe, for significant youth-generated projects worked out in cooperation with, rather than in opposition to, the high school.

Community work experience. Supervised, vocational work experience in the community has long been available to limited numbers of high school students and advocated for many more. A proposal for broadening this experience to include civic and social service for all students was presented as follows in *The High School of the Future*:

A large part of each year's program for the individual would consist of actual work in the community. This would be of three types: vocational experience, civic service, and social service. The vocational experience would be designed to give an understanding of the world of work and to let the student find his own identity and relationship to it. Industrialists, professional people, labor leaders and businessmen would participate in this program. The civic experience would be designed to give an understanding and appreciation of public services and governmental activities and policies. Civic leaders and government officials would be involved. The social service would be designed to help the individual understand and value people from all walks of life, from backgrounds other than his own, and those with problems he might not otherwise encounter. Community activity as a part of the education of youth has proved itself in many ways. VISTA, the Peace Corps, and the distributive education program are examples. The newly vocal student interest in politics and political policies has added dimension to our own concerns for this type of experience. We cannot afford in the world of today to keep our students isolated from genuine participation in the problems of our time.²¹

²⁰ Lawrence M. Brammer, "The Coming Revolt of High School Students," *Bulletin of the National Association of Secondary School Principals*, 52:19-20 (September 1968).

²¹ Theodore and Chandos Rice, "The School of the Future—a Commentary," Chap-

The present authors' views and proposals as to the extension of the high school into many facets of community activities and educational opportunities are explained in our final chapter (12).

Guidance and Other Special Services

One of the most marked contrasts between the high school of the 1970s and that of the 1930s or even 1940s or 1950s is in the provision of guidance and other special services found to varying extents by 1970 but rarely present in the earlier decades. Growing concern for the individual student and the range of individual differences and needs within the high school population, the post-World War II push for continuing education beyond the high school, and many new programs relating to the welfare of disadvantaged and other special categories of students impelled the schools to provide staffs and facilities for a variety of services to individuals not known or at least rarely offered before World War II. During the 1950s and 1960s, continuing efforts to train specialists in guidance and other services and to fund their employment aided marked expansion of these services although, even by 1970, many schools still lacked some services entirely, and many others employed personnel in numbers far below standards regarded as adequate. Conant had recommended in 1959 that one full-time counselor should be provided for every 250 to 300 students, but despite wide attention to his recommendation, he found in his follow-up study (1967) that in only 13.9 percent of the schools was the ratio one to 299 or less.⁷² Although we ourselves doubt the efficacy of any such quantitative standard, we do recognize the growing complexity of the problems of high school students and their need for well-trained counselors to assist in these problems. Although a school may never be able to provide all the counseling assistance its students need, combinations of responsibilities of guidance specialists, social workers, psychologists, psychiatrists, teachers, and others can and do provide much help not otherwise available.

The range of services provided by high schools is briefly identified and described in the following list:

Guidance and counseling—services of counselors, guidance directors, deans, coordinators, and persons having other titles in helping teachers and

7. In William M. Alexander, ed., *The High School of the Future: A Memorial to Kimball Wiles* (Columbus: Charles E. Merrill Publishing Company 1969), p. 97. Also see for an earlier, detailed proposal along these same lines: Archibald Shaw and John Lyon Reid, "The Random Falls Idea," *School Executive*, 75:47-87 (March 1956). This plan included a program of youth apprenticeship in citizenship heavily relying on participation in community affairs. It is described more fully in our Chapter 12.

⁷² Conant, *The Comprehensive High School*, p. 26.

individual students with problems of education, vocations, or other areas. These services may include in addition to individual counseling, individual and group testing, conferring with parents and others, liaison with specialists outside the school, and supervising the maintenance of individual records.

Social case work—perhaps available not in the high school alone but in conjunction with other schools and social agencies and providing for out-of-school investigations and assistance in a variety of youth problem situations.

Clinical services—health services, including psychiatric services, usually by arrangement with local health and medical organizations, psychological services, and various provisions for diagnosis of severe physical, learning, emotional, and social problems.

Special education—various provisions in and out of the high school for students who are physically or mentally handicapped, homebound, or otherwise able to do some types of high school work but unable to participate fully in the regular high school program. Although many handicapped children never have secondary education, for some years marked increases have occurred in the provisions for individuals with speech defects, mental retardation, and special health problems, and recently, for migrants and pregnant girls.

Placement services—especially for part-time employment, work-experience programs, and in the vocational areas for special training to adjust from one specialty to another.

Continuation school services—in addition to regular evening school programs, continuation services through counseling contacts with former students, both dropouts and graduates, supervision of apprenticeship in some vocational fields, and correspondence courses.

Other services—individual high schools provide many other services to individual students including employment opportunities in the school, securing financial assistance, arranging for individual students to take courses in nearby colleges or other schools, intervention in court cases, assisting with transfers of students to other schools, and so forth.

- executive officers of several subject-field associations as worthy of a high school principal's reading time.
11. Trump, J. Lloyd, and Delmas F. Miller, *Secondary School Curriculum Improvement: Proposals and Procedures*. Boston: Allyn and Bacon, Inc., 1968. Includes 11 chapters on the subject areas, and other useful chapters on various aspects of a modern high school program and organization.

CHAPTER 7

Changing Knowledge— Changing Curriculum Designs and Content

School programs have at times been operated as though subject matter were the one fixed ingredient of schooling; that is, despite changes in the society, the students, the goals of the school, its personnel, and facilities, a school may offer the same courses and activities from year to year with little change. Chapter 6 revealed that the basic subject offerings changed relatively slowly during the twentieth century; mostly, new courses were added.

But by the 1970s, high school educators had become very much aware of the fallacy of any notion of a fixed, unchanging body of knowledge to be taught. In the first place, the knowledge explosion of the mid-twentieth century had to be reflected in new content of the courses and activities if not in new courses and activities. Almost everywhere "new" sequences, structures, and conceptual items began to crowd out obsolescent content.

In the second place, educators, students, and citizens severely criticized the high school curriculum in the 1960s as not being relevant. It was not relevant, it was variously argued, to such diverse factors as the current social situation, the needs of disadvantaged students, the problems of minority groups, an urban, technological culture, and even to the newly arising youth movement itself. As we see the resultant changes, their focus has been on (1) the changes in program offerings described in Chapter 6 and further regarding some fields in Chapter 7, (2) a new concern for individualizing curriculum options, detailed in Chapter 8, and (3) comprehensive changes to alternative schools such as storefront academies and others (sometimes called "free," "independent," and so on) that sprang up in the late 1960s and early 1970s, and perhaps to the more complete but different public high school we describe in Chapter 12.

In this chapter we turn attention to this relationship of knowledge

to the high school curriculum, and especially to current and possible future changes in curriculum designs and content necessitated and facilitated by growing and changing knowledge. We should first emphasize the fact that a school's curriculum is inextricably tied to organized knowledge. Whatever subject matter is included in the curriculum must be based on man's present knowledge. Whatever learning opportunities the school contrives are necessarily limited by the knowledge of the contrivers. The chief problem of the curriculum planner focuses on the question of selection: What is relevant to both society and the individual? What to teach to whom? But there are several related questions of major significance: How can the knowledge base of curriculum content be kept updated? What organizations or designs should help in the selection of subject matter? What types of learning materials and resources aid the learner in acquiring curriculum content? Such questions as these are the concerns of this chapter.

The Knowledge Explosion and the Curriculum

The single most important factor in the so-called "curriculum reformation" of the 1960s was the somewhat belated but very active effort of the schools to attune their programs to the expansion of knowledge. The ever-mounting output of scientists and scholars, paralleled by technological advancement even into the conquest of space, meant that much subject matter taught in the 1950s and later was almost hopelessly out-of-date. The launching of the first Russian Sputnik in 1957 precipitated an overdue examination of some curriculum areas, especially science and mathematics, that spilled over into curriculum development in general. By 1970 there was widespread acceptance of the inevitability of expanding and changing knowledge and of the need for parallel processes of curriculum development which would keep curriculum content updated. There remained to be found adequate means of leading and funding the curriculum development activities necessary to maintain updatedness in some 26,000 high schools across the country with their hundreds of thousands of classrooms and the even larger number of schools and classrooms at other levels.

The facts of the knowledge explosion are well known. They may be summed up in the following statements. Man is discovering or inventing new knowledge at an ever more rapid pace. Each individual can know on the average an ever-smaller proportion of all that is known. Our lives are affected and will be continually affected by the changes in technology and society new knowledge produces. A major problem of the human being is to choose and use the knowledge he needs to adapt himself to change and to achieve his life goals.

The implications of these facts for the high school curriculum are highly significant and far-reaching. Tyler drew these six implications:

1. "Concentrate the major efforts of the high school on important tasks which it can do best"—leaving to other agencies those tasks they can do as well or better.
2. Keep each curriculum field "periodically, if not continuously, updated as to its objectives, its content and emphasis, and its learning experiences"—using the general approach (collaboration, tryout, and revision) of the national curriculum projects as described in a later section of this chapter.
3. "Emphasize throughout the curriculum the concept of education as a process of continued life-long learning" by developing the skills, interests, and habits required.
4. "Select and organize the content in a way that can be understood by the student and used by him effectively"—utilizing the structure of the subject.
5. "Work out better sequences of learning in the several fields"—although good sequences are not as yet available in all fields.
6. "Give more careful attention to efficient learning"—recognizing seven conditions Tyler noted as having a marked influence on the effectiveness of learning.¹

Our own analysis of the implications of the knowledge explosion for the high school curriculum and our observations as to current changes in process suggest these major approaches to relating changing knowledge and the curriculum:

1. Emphasis on the interests and skills needed for continued learning
 2. Formulation of flexible curriculum designs for selecting and organizing content
 3. Organization of content into meaningful and flexible instructional units
 4. Use of varied instructional materials and media to facilitate learning
- Subsequent sections of this chapter describe these approaches as currently applied in the high school curriculum.

Emphasis on the Interests and Skills for Continued Learning

In a world of ever-expanding knowledge, schooling's main function is to help the learner to want to learn and to know how to learn. John Gardner put it this way:

The ultimate goal of the educational system is to shift to the individual the burden of pursuing his own education. This will not be a widely shared pursuit until we get over our odd conviction that education is what goes on in school buildings and nowhere else. Not only does education continue when schooling ends, but it is not confined to what may be studied in adult education courses. The world is an incomparable

¹ Ralph W. Tyler, "The Knowledge Explosion: Implications for Secondary Education," *The Educational Forum*, 29:145-153 (January 1965).

classroom, and life is a memorable teacher for those who aren't afraid of her.²

The high school in particular must focus on the development of the student who continues his learning career ever afterwards. Many of its graduates go on to college; those who are most successful there will be the self-directing learners. More importantly, the self-directing ones who do not go on to college will be able nevertheless to continue teaching themselves.

We view the development of self-directing learners as the central aim of high school education. We share Glatthorn's belief that "the student can best fulfill his potential as he becomes more and more self-directed in his learnings—as he makes more and more decisions for himself about when to study, what to study, where to study, and how to study," and we agree further that:

All students need this growth toward autonomy, and it is achieved not by reading about it or listening to sermons about it—but by experiencing it under the direction of an instructional staff which knows when and how to keep hands off.³

However popular this goal, the facts are clear that the high schools have generally maximized *other*- rather than *self*-directed learning. Instructional staffs have not kept "hands off"—because past systems of education have relied on the pressures of college entrance requirements, marking systems, standardized examinations, ground-to-be-covered syllabi, uniform homework assignments, and facts all too frequently to be memorized rather than understood and used.

It may be as Parker and Rubin suggest, that a new concept of curriculum content emphasizing learning process itself as content is required. Their point of view is:

The substance of our proposition is that process—the cluster of diverse procedures which surround the acquisition and utilization of knowledge—is, in fact, the highest form of content and the most appropriate base for curriculum change. It is in the teaching of process that we can best portray learning as a perpetual endeavor and not something which terminates with the end of school. Through process, we can employ knowledge not merely as a composite of information but as a system for learning.⁴

² John W. Gardner, *Self-Renewal: The Individual and the Innovative Society* (New York: Harper & Row, Publishers, 1964), p. 12.

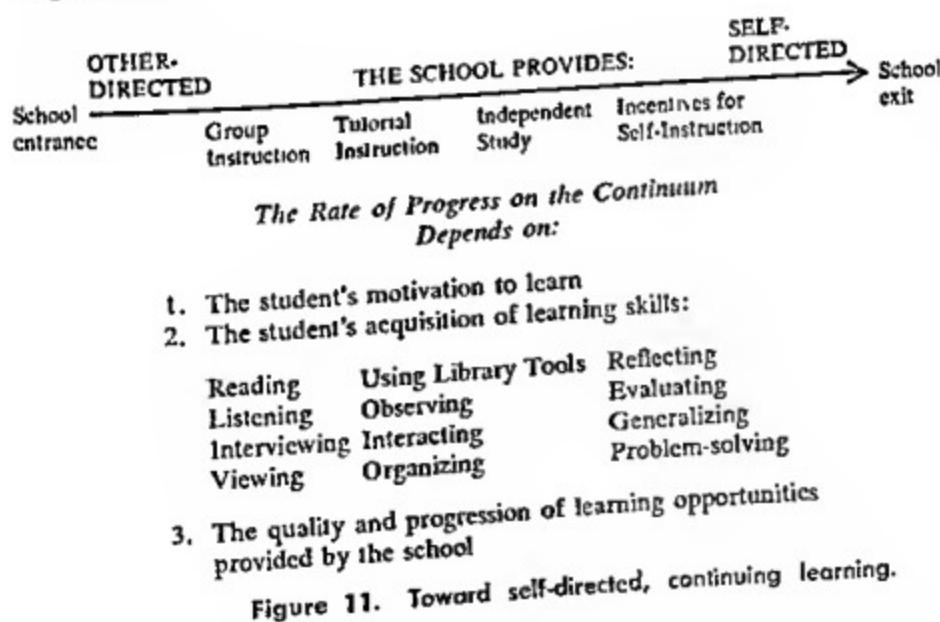
³ Allan A. Glatthorn, "Individual Fulfillment in the Large High School," *The Bulletin of the National Association of Secondary School Principals*, 53:54 (March 1969).

⁴ J. Cecil Parker and Louis J. Rubin, *Process as Content, Curriculum Design and the Application of Knowledge* (Skokie, Ill.: Rand McNally & Company, 1966), p. t.

Although the content design still predominates, the high school of today is working harder at developing the self-directed or independent learner. Whether it succeeds may well determine the fate of this generation of adolescents in achieving intellectual maturity and emotional stability in the uncertain world they face. The independent learners they need to become would have these characteristics that would equip them for successful careers as lifelong learners:

1. The independent learner undertakes on his own initiative learning tasks that are important to him.
2. He uses sources of information efficiently.
3. He tests out reflectively possible answers, solutions, ideas, to see whether they are adequate.
4. He seeks to apply generalizations from former to new situations.
5. He is not easily discouraged by the difficulty of the learning task nor by forces which would have him accept inadequate answers, solutions, and ideas.
6. He enjoys learning and seeks opportunities to learn.⁵

Four different, although somewhat overlapping, approaches schools are using to develop learners with these characteristics are described in the following paragraphs. The whole process is seen as a continuum (see Figure 11).



⁵ William M. Alexander, Vynce A. Hines, and Associates. *Independent Study in Secondary Schools* (New York: Holt, Rinehart and Winston, Inc., 1967), p. 4.

Schoolwide Emphases

The concept of every classroom as a place for teaching learning skills with every teacher responsible for such instruction is widely held but perhaps as widely ineffective. Teachers vary greatly in their own interests and skills for learning and for teaching these skills. The necessary skills themselves are numerous and complex; a partial list includes:

- Reading
- Listening
- Asking questions; interviewing
- Viewing films, television, and other visual resources
- Using library tools and resources
- Interacting with group members
- Observing the natural and social environment
- Organizing information
- Evaluating information, opinion, observation
- Reflecting on previous experiences relevant to present questions
- Generalizing from observation, incidents, reading, discussion, and so forth
- Attacking and solving problems

A school-wide commitment to emphasis on these skills in all classrooms, with continual faculty study of ways and means of teaching them, would undoubtedly place a needed priority on this objective. Perhaps even more important would be a faculty-wide understanding of the role of interest in learning and as much utilization as possible of teaching strategies and teacher motivational techniques. "Learning how to learn is pointless," wrote Frymier in his essay for *The High School of the Future: A Memorial to Kimball Wiles*, "if students have not learned to want to learn."⁶ The task of the educator as he defined it is a challenging and demanding one:

Helping children learn to want to learn presumes the most basic educational objective of all, that of valuing learning. Unless children have learned to believe in the worthwhileness of learning as a human activity, nothing else will count much anyway. Unless they are committed to learning as a way of bettering their own lives and the lives of all mankind, and unless they believe in learning as a powerful, creative, and superbly human way of resolving problems and coping with reality and the myriad of other facets of daily living, they most certainly will not want to learn, nor will they learn how to learn. Further, it is hard to believe that such persons would ever value knowledge, or acquire it, or understand it; therefore, it could hardly affect their lives. It is in this sense that "helping children learn" must begin with helping children learn to value learning as an exquisite, exciting, practical, and lifelong

⁶ Jack R. Frymier, "Some Answers Must Be Questioned," Chap. 3 in William M. Alexander, ed., *The High School of the Future: A Memorial to Kimball Wiles* (Columbus, Ohio: Charles E. Merrill Books, Inc., 1969), p. 31.

human enterprise, which will carry over in countless practical, esthetic, intellectual, social and personal ways.⁷

The high school educator who accepts this task, and we see no alternative, must be himself a learning enthusiast. He must refer to data as he deals with questions and problems; further, he must reflect the excitement and high interest that motivate his own learning and his direction of others' learning. Learning, as he exhibits and guides it, may be slow and even difficult but always it is interesting and rewarding. He makes looking up a question in an encyclopedia a routine but satisfying task; interviewing an authority a significant but not anxiety-laden experience. Reference books, indexes, library tools in general are part of his standard operating procedure, which he promotes by demonstration rather than exhortation.

Schools that have some success in emphasizing learning skills and interests throughout the school also utilize the other approaches described below. In addition, these schools make the learning resources center (or library) a very important school facility, with many incentives and aids to attract students to frequent and intensive use of the available resources. In these schools, departmental, team, and other faculty planning groups give continuing attention to the problems of developing learning skills and interests in their curriculum areas. Information is exchanged about learning problems of individual students, and assistance of counselors and specialists is sought and used in working with student learning problems. Individual teachers are helped to assess their own plans for developing learning skills and interests through consultations, in-service education, and instructional materials provided by administrative and consultant personnel.

Skills Development Laboratories

Laboratory-type approaches to teaching learning skills are relatively uncommon but definitely needed in high schools. Many students entering high school simply lack the basic skills needed in their studies. Unless they can acquire these skills at this point, failure, possible dropout, and general aversion to learning and schooling now and later are almost inevitable. Furthermore, even the students who have average or better competence in the more traditional learning skills, especially in reading, need specific instruction in others. Skill development is at best a laboratory-type activity involving individual progression in specific exercises, both initiatory and practice types.

Familiar examples of the laboratory-type approach to learning skills are found in reading, foreign languages, library, science, prevocational, and other laboratory-equipped instruction. In reading instruction, various

⁷ Frymier.

types of materials and machines are used to help the individual with reading difficulties that can be remedied in the school setting. The electronic language laboratory is used to help the student acquire speaking and listening skills in a foreign language; it can also be used for teaching these skills in English. In the library, specific instruction is given in the use of whatever learning resources the center holds, including in a growing number of schools individual-learning stations (carrels) equipped for hearing and viewing media. In the science, home economics, industrial arts, business education, and other specialized laboratories, much attention is usually given to learning processes, especially as they relate to the equipment available.

More imaginative laboratory-type plans for skills development are being initiated, and others can well be expected. Interviewing and dialogue can be effectively demonstrated and practiced in English and other classes. Use of media may be taught in any situation, and should be specifically included in social studies instruction. Here, too, group discussion techniques can be taught through role-playing, simulation, and group process activities. Discussion skills laboratories might be useful for short-term training for all students. Specific training in higher intellectual processes such as problem-solving can also be given through games, role-playing, simulation, and various other types of demonstration with follow-up analysis and replays.

Individualized Instruction

Some individualized instruction, as a one teacher-one student relationship, is essential in these laboratory-type skills development activities. Machines and programmed materials can and do replace the teacher's continuous presence, but the most effective skills development programs still involve teacher-student interaction in selecting and initiating programs and in evaluating progress.

Individualized instruction in the various curriculum areas of the high school also serves as a most useful approach to teaching learning skills. As the student is proceeding individually in the mathematics sequence, for example, his teacher has opportunity to observe the student's skills in reading or observing or reflecting and, hopefully, to give direct help in these skills. When he lacks needed skills, the student may be referred to a laboratory where they can be developed. The possibilities and procedures of individualized instruction are treated more fully in Chapter 10.

Independent Study

As noted earlier, the fundamental purpose of teaching learning skills and indeed of the entire high school program is to develop the independent

learner. One simply cannot learn well on his own before he has acquired some know-how about learning. However, we view independent study as both an end and a means; that is, the learner becomes increasingly independent as he successfully studies independently. Readiness for independent study as we see it is a continuum rather than a point in the learner's schooling.

Ideally the learner becomes increasingly independent as he moves up the school ladder—he would logically require less and less external direction from early to later years of schooling. Unfortunately, high schools have tended to reverse this natural movement somewhat by imposing many other-directed assignments rather than freeing and aiding the learner's self-assignments. The current movement toward increasing independent study opportunities attempts to utilize and build self-direction. The organizational opportunities for independent study are described in Chapter 8, and the teacher's role therein is specified in Chapter 10. Here we merely emphasize the possibility that a learner's experience in tackling on his own, with such skills as he has and such counsel as his teacher can wisely give, a question or task of importance to him may very well stimulate his interest in acquiring better learning skills as well as providing practice in those he has. Therefore independent studies, planned individually by students with appropriate teacher help, contribute a very significant approach to developing learning skills and interests.

Redesigning the Curriculum

Intermittently in the twentieth century, efforts have been made to break away from the traditional and predominant curriculum design—the subject curriculum. Not until well into this century had any serious challenge ever been made of the historical organization of knowledge into disciplines and of the parallel divisions of the school curriculum into subjects directly patterned after the scholar's organization. With new attention to the psychology of learning and mounting concern for the relationship of school and society, new organizations of curriculum content began to emerge in the 1920s and 1930s. The concept of curriculum design itself became a way of classifying curriculum innovations of these and following decades.

Curriculum design relates to the general shape, framework, pattern, or organization of learning opportunities offered by the school. In Chapter 6 we used this classification of learning opportunities: the program of studies, the direct instructional program, extrainstructional (or extraclassroom) learning opportunities, guidance, and other special services. This classification itself assumes a separation in curriculum design of the knowledge component (program of studies and instruction therein) from the extrainstructional and service opportunities. Discussions of designing

have commonly related only to the knowledge component, although the point could be and has been argued that the extrainstructional opportunities need just as careful planning and fitting into the total program of the school. Our present discussion, however, relates to the utilization of organized knowledge in the high school curriculum.

Efforts to formulate comprehensive theories of the curriculum and its organization or design have been strongly influenced by the theorists' conception of the relative importance of the three major determinants of the curriculum: the learner, society, and knowledge. Almost every design theory seems to be oriented more to one of these determinants than to the other two. Brief reviews of several theories and their current applications to the central problems of designing curriculums in an era of expanding knowledge follow. The concept of curriculum design is also presented in Figure 12, to show the relationship of underlying factors, the designing process, the possible designs and elements, and the curriculum.

Subject-oriented Designs

The organization of knowledge into bodies of subject matter, usually but not completely derived from the established disciplines, called "subjects," is the principal method of organizing the program of studies and instruction in the secondary school (and at other levels, too). Learning opportunities are arranged by subjects, and usually teaching assignments, schedule arrangements, pupil progress systems, and indeed the total high school organization has been determined by the subject offering.

Because of its intimate relationship to the organization of knowledge and its extensive use in higher education, this design has never been displaced. In fact other designs have from time to time been discredited, and the curriculum reform movement beginning in the late 1950s was squarely rooted in this design. But in updating the subjects and improving their internal design and their instruction, the reform movement utilized principles heretofore associated with less subject-bound designs.

A major issue within the subject design is that of "what subjects?" Can a subject be any organization of content which the high school lists in its program of studies as a credit course, or is it necessarily related to the established disciplines? The latter point of view is vigorously maintained by Brownell and King in their statement of a curriculum theory based on the primacy of the disciplines of knowledge:

We have defined the school as a microcosm of the world of intellect. The curriculum in the disciplines is the heart of such a school. The curricular function is paramount. The nondiscipline curriculum—the straightforward occupational, social, and personal training—should not under any circumstances replace an element of the liberal curriculum for any student. Occupational training desirably follows liberal studies and should occur just before the individual's departure from organized school-

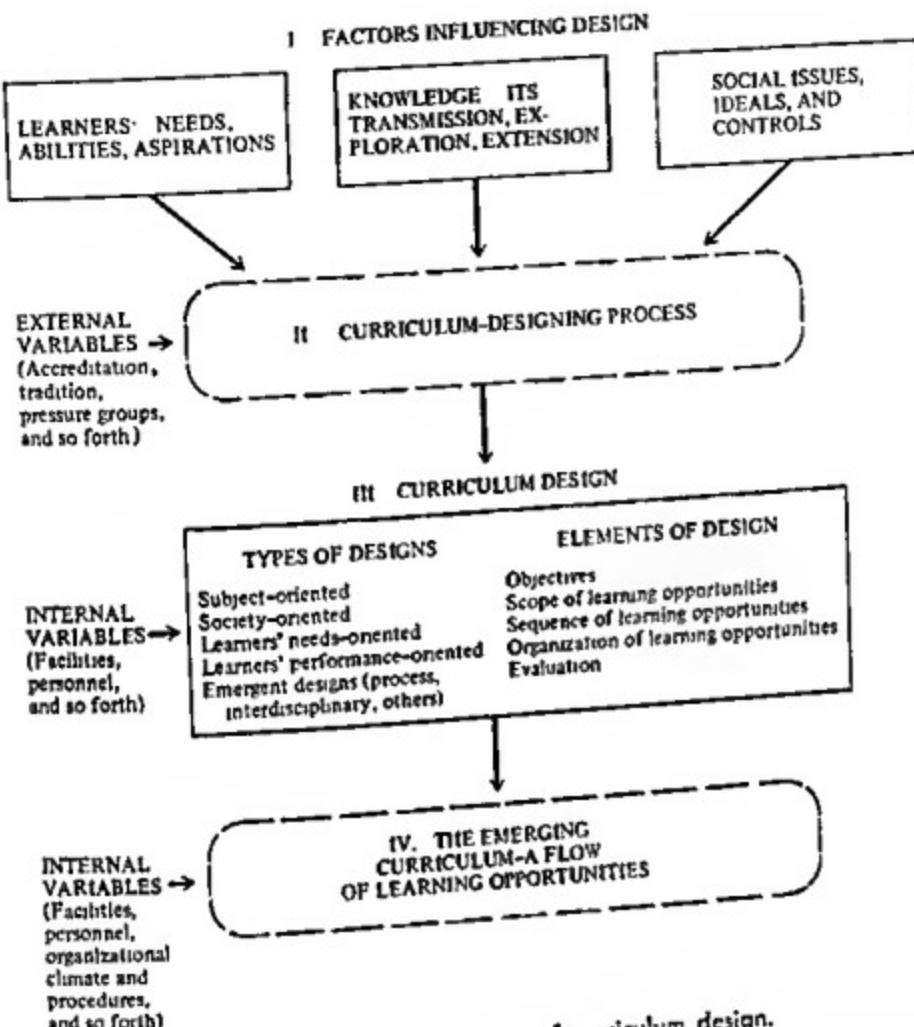


Figure 12. A concept of curriculum design.

ing. Preferably, occupational training should take place in a program designed for industry or an occupation and carried out in a special setting such as the technical institute, on-the-job-training program, armed services school, or other well-resourced special program. If the school is required by law or other mandate to teach nondisciplined matter in an organized fashion, it should use great ingenuity in locating such training (as driver education, grooming, or personal typing) in afterschool hours, on Saturdays, or in summers. The noncurricular functions which are organized and financed by the school should be generally supportive of intellect and culture.⁸

⁸ Arthur R. King, Jr., and John A. Brownell, *The Curriculum and the Disciplines of Knowledge* (New York: John Wiley & Sons, Inc., 1966), p. 119.

The reform movement generally reflected the position described by King and Brownell, although curriculum practice in the high school continues to offer many subjects for credit which bear little relationship to the established disciplines. And other design theories, especially those oriented to the learner, would and do encourage many organizations of learning that depart very far from the disciplines.

The most critical issue in recent curriculum designing has not been whether to focus on subjects or what subjects to include, but how to organize the content within the discipline, field, subject, or course, however defined, so as to be learned and used. Instead of seeking new curriculum patterns not centered on the subjects, most reformers have concentrated on redefining within the traditional pattern. These efforts are described in a later section of this chapter.

Society-oriented Designs

At several points in the history of curriculum development, stresses in contemporary society have strongly influenced particular curriculum developments. Thus wars have caused increased attention to physical fitness, wartime industry, and preservice orientation; depressions and unemployment have had various effects including renewed attention to vocational education; and such problems as inflation, drug addiction, racial conflicts, and sexual promiscuity have been paralleled by arguments for such courses respectively related as consumer education, health education, black studies, and sex education or family life.

Theories of design oriented to social life and problems which would be less expedient in origin and use have also been proposed and to varying extents utilized. In the 1930s a number of state departments of education working with Hollis L. Caswell, then at George Peabody College for Teachers, developed state programs of instructional improvement organized around a curriculum design featuring "social functions": "Certain major centers about which the activities of individuals and the plans and problems of the group tend to cluster" and which "tend to persist and to be common for all organized groups."¹⁹ A related design described by Stratemeyer and others utilized the concept of "persistent life situations" learners face.²⁰

Many courses of study and curriculum study programs have been based or focused on such related categories as social problems, areas of living, life activities, social needs, and the like. A recent publication re-

¹⁹ Hollis L. Caswell and Doak S. Campbell, *Curriculum Development* (New York: American Book Company, 1935), p. 173.

²⁰ See Florence B. Stratemeyer and others, *Developing a Curriculum for Modern Living*, 2d ed., rev. and enl. (New York: Teachers College Press, Columbia University, 1957).

and services are frequently reactions to social problems and pressures; that is, knowledge on such important topics in 1970 as sex and family life, black history and literature, and contemporary music could be organized as new, elective courses rather than being incorporated into the existing subject design, or both revised courses and new ones could be developed. Thus, a 1970 review of developments regarding the inclusion of black studies noted that "nearly all educators believe material about Negroes and other ethnic groups should ultimately be woven into the regular curriculum as an integral part of everything that is taught in K-12," but also that "educators say they also feel a responsibility to offer separate courses in ethnic studies for older students, who will never be able to take advantage of an integrated curriculum to make up for the years of neglect in this area."¹² The new courses reported as being added were black (or Afro-American) history, black culture, Swahili, jazz, black literature, and black art.

3. Continuing analyses of community problems and issues, perhaps assisted by citizens' participation in curriculum evaluation and development, serve as a constant force in curriculum planning. These analyses may affect the school's overall curriculum framework in many ways, for example: setting (or eliminating) limits on discussion of controversial issues; modifying vocational education opportunities; creating "crash" programs for particular, immediate objectives; regulating student behavior.

Learners' Needs-oriented Designs

The child-centered philosophy of curriculum development of the 1920s and 1930s fell into some disuse if not disrepute during the World War II and postwar period. As "progressive education" of a very loosely defined and poorly implemented nature, it probably deserved its abandonment. But such basic principles as the importance of the learner's own motivation and self-direction survived the Progressive Education Association and became of first importance, not only in new curriculum-designing efforts but in the selection and organization of knowledge within the subject design.

The concept of the individual's own needs, interests, and problems as the organizing center for the curriculum probably affected the elementary school more than any other level, although the Progressive Education Association did develop curriculum designs for high school general education based on this concept,¹³ and some of the Eight-Year Study schools and others incorporated some of the newer emphases in their programs. Although few if any high schools ever fully implemented the extreme

¹² "Schools Jump on Black Studies Bandwagon," *Education USA*, January 19, 1970, p. 109. See for surveys and case studies of programs, Editors of *Education USA*, *Black Studies in Schools* (Washington, D.C.: National School Public Relations Association, 1970).

¹³ See Progressive Education Association, Commission on Secondary School Curriculum, *Science in General Education* (New York: Appleton-Century-Crofts, 1938).

idea of an unstructured "experience" curriculum in which pupil-teacher planning developed the curriculum plan within the classroom situation,¹⁴ many aspects of the high school curriculum have used learners' needs as a basis for selecting and organizing knowledge. The entire extrainstructional program of activities and services is much more characteristically focused on the students' own needs and interests than the instructional program. But even within the subject design, students' needs and interests influence learning opportunities in such ways as these:

1. Elective subjects may be offered by request of students or in anticipation of special needs and interests to be met.
2. Special types of groupings and short-term courses may be organized to meet particular needs: remedial reading, corrective physical education, or advanced placement English, for example.
3. Independent study plans may be worked out with individual students to serve particular needs and interests for studies not available in the regular class program, either to supplement or substitute for existing courses.
4. Various types of individualized instruction give direct attention to individual needs and interests in every field of the subject curriculum.

During the 1960s, a new wave of concern for the individual student created a focus on him involving curriculum and instruction that went much further toward implementation of the needs and interests design than ever occurred during the heyday of "progressive education." These newer emphases are fully described in the Chapter 8 of this book.

Learners' Performance-oriented Designs

Although all curriculum designs and plans aim at the ultimate performance or behavior of learners, some designing techniques directly focus on the skills, competencies, and other behavior to be engendered as the basis for organizing the curriculum plan. An early work on curriculum defined it as "*that series of things which children must do and experience by way of developing ability to do things well that make up the affairs of adult life*,"¹⁵ and its author, Franklin Bobbitt, described an "activity analysis approach" to curriculum development. This approach involved the division of human activities into major fields, the specification of abilities needed to perform these activities, and assignment of these abilities for instruction by school level and subject. As early as 1922, the Los Angeles curriculum program followed this approach, which with variations has dominated as an aims- or objectives-defining process much subsequent curriculum development. The "major objectives of education" utilized in

¹⁴ See H. Thomas Hopkins, *Interaction: The Democratic Process* (Boston: D. C. Heath and Company, 1941) for an exposition of this theory.

¹⁵ Franklin Bobbitt, *The Curriculum* (Boston: Houghton Mifflin Company, 1918), p. 42.

this program as directed and reported by Bobbitt¹⁶ were grouped in these major fields:

- Social intercommunication
- Maintenance of physical efficiency
- Efficient citizenship
- General social contacts and relationships
- Leisure occupations
- General mental efficiency
- Religious attitudes and activities
- Parental responsibilities
- Unspecialized practical activities
- Occupational activities

Even earlier, studies of adult usage had been basic to curriculum planning for particular subjects; in fact, Caswell and Campbell in 1935 cited a list of spelling words derived from common usage that was published as early as 1582.¹⁷ The same technique of adult activity analysis for selecting subject matter has been widely employed in such subjects as reading, arithmetic, speech, composition, physical and health education, foreign languages (speaking and writing), some aspects of social studies, science, and most prevocational and vocational subjects.

In the vocational field, the application of this design is job analysis. The job is analyzed into its specific tasks or other components, and students work at the job to gain competence in its tasks. The theory related to the job and more general aspects of the vocation are also studied in whatever organization is appropriate thereto.

The same approach is basic to curriculum planning for any area in which performance of specified skills or tasks is the aim—music, art, driver education, physical education, and, in fact, the skills aspect of any subject. Defining the tasks and means of developing competence in them is the central phase of curriculum designing, although there are also the necessities of relating tasks to their purposes and of changing tasks and procedures of performing them.

Curriculum improvement efforts of the late 1960s seemed to revive the emphases on stating precise objectives that marked the curriculum development activities of the 1920s, although the new stress is derived from analysis of students' learning processes rather than adult activities. "Behavioral objectives" specifying precise goals for instruction and criteria for evaluating goal attainment again stressed student performance. Although full application of the behavioral objective approach will inevitably delimit

¹⁶ See Franklin Bobbitt, *How to Make A Curriculum* (Boston: Houghton Mifflin Company, 1924), for a full description of the Los Angeles program, including the detailed objectives prepared in this program.

¹⁷ Caswell and Campbell, p. 256.

the curriculum design and content, this approach is more directly related to instructional process than to curriculum design, and is treated fully in Chapter 9. It should be noted too that programmed instruction, which we describe in Chapter 10, is based on student performance objectives.

Designs Involving New Organizations of Knowledge

In retrospect, each of the other design theories sketched above is more a criterion for selecting knowledge from its usual organization by disciplines (that is, the subject design) than it is a fundamentally different design. Thus, a curriculum organized around social problems would likely draw its content from social sciences; one around learners' needs and interests from whatever subjects were relevant at the time; and one around learners' performance from whatever bodies of knowledge, not necessarily organized as formal disciplines, pertain to the activities to be performed. The original developers of these designs probably intended new syntheses of content, but in practical applications the subject design persisted and the new principles were utilized in selecting subject matter within the subjects or in setting up supplementary or alternative instructional programs. Other theories aim at major departures from the subject design, although only the first two identified below have been seriously attempted.

Core curriculum plans. During the 1930s some high schools moved away from the subject design of the curriculum to the extent of substituting for certain required subjects, usually English and social studies, a "core" of content selected by the teacher concerned on the basis of whatever design principle they used: needs and interest of learners; social problems or areas of living; or persistent cultural activities or issues or ideals; or other bases.¹⁸ Thus one of the other designing theories might be used in developing the core program, and the subject boundaries might disappear. Mounting criticisms of the core approach after World War II, together with the renewed emphasis on the major subject fields, tended to drive core programs out of senior high schools.¹⁹ It persisted and grew in the junior

¹⁸ Several sources can be consulted for full accounts of the core curriculum as developed in theory and practice during the second quarter of the twentieth century: Harold B. and Elsie J. Albery, *Reorganizing the High-School Curriculum*, 3d ed. (New York: Crowell-Collier and Macmillan, Inc., 1962), ch. 6 (the 1953 edition has additional chapters on core); Roland C. Faunce and Nelson L. Bossing, *Developing the Core Curriculum*, 2d ed. (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1958); Lucile L. Lurry and Elsie J. Albery, *Developing A High-School Core Program* (New York: Crowell-Collier and Macmillan, Inc., 1957); Grace S. Wright, *Core Curriculum Development: Problems and Practices*, USOE Bulletin 1952, No. 5 (Washington, D.C.: Government Printing Office, 1952).

¹⁹ See Gordon F. Vars, "The Core Curriculum: Lively Corpse," *Clearing House*, 42:515-519 (May 1968) for the contrary position that core is very much alive.

high school as a transitional program between elementary and high school, in the form of a block-time program wherein one (or more) teachers teach a group of students two (or more) periods with flexibility as to the distribution of time and the emphasis on the subjects included, again usually English and social studies.

The core idea is also being utilized in interdisciplinary team teaching arrangements (see Chapter 11) and in the organization of interdisciplinary courses.

Interdisciplinary courses. Many students of the major disciplines of knowledge would consider almost any subject taught in high school other than language, mathematics, the social studies, the sciences, and the arts as an interdisciplinary course or perhaps as a collection of materials unrelated to the disciplines. We ourselves note the tendency in curriculum development of using double terms, the latter one "education," to denote fields which have few of the characteristics of a discipline: business education, conservation education, consumer education, distributive education, health education, home economics education, industrial arts education, physical education, sex education, vocational education, for example. Note that these subjects relate closely to the society-oriented design, most of them having entered the curriculum in response to some social problems area but as a new subject rather than as a new strand of the curriculum pattern. As each becomes fixed as a course or group of courses, it takes on a content that in time loses its cross-disciplinary parentage and develops its own mode of investigation and characteristic structure that produces and organizes new knowledge.

New interdisciplinary areas are usually in process of development. Those provoking most interest in the early 1970s are humanities, aesthetics education, and family life and sex education. The new humanities courses include a variety of combinations of disciplines, topics, and teaching arrangements. Their common focus is on the study of man; the disciplines are cut across for content dealing with man's ideas and modes of expression and the forces which influence these.²⁰

New programs in aesthetic education seek to interrelate various areas of aesthetics and to relate aesthetics more closely to broader subject matter areas. Dance, literature, music, theater, and visual arts are included.

Family life and sex education became highly controversial in some

²⁰ Pertinent reference on humanities courses include Charles R. Keller, "Interdisciplinary Humanities Courses, *NEA Journal* 57:19-20 (January 1968); Carolyn A. Glass and Richard L. Miller, "Humanities Courses in Secondary Schools, *Educational Theory*, 17:227-235 (July 1967); Robert V. Denley, "NCTE/ERIC Report on Humanities," *English Journal*, 58:272-280 (February 1969); and Louise M. Berman, ed., *The Humanities and the Curriculum* (Washington, D.C.: Association for Supervision and Curriculum Development, NEA, 1967).

communities in the late 1960s, just as new programs were being developed in response to widespread problems of broken homes, early marriages, increasing numbers of unwed teen-age mothers, venereal disease, and sexual promiscuity. The problems of when, what, who, and how to teach courses in this complex and delicate subject remain very difficult. It is very clear, however, that several disciplines are involved: biology, psychology, anthropology, sociology, and even medicine and religion. Current approaches include planned sequences of content beginning in the elementary school, with specific units of instruction in various high school courses.²¹

Current concerns for drug education, family life education, and environmental education should, most educators believe, involve content and teachers from several subject fields.

Broad proposals for redesigning the curriculum. The curriculum reform movement brought many sorely needed improvements in the subject design, as we shall detail in the next section, but has not produced a new design of the curriculum. In a 1963 conference of national curriculum project directors and ASCD leaders, the need for such a design was labeled as today's "greatest curriculum need":

Much as the projects have moved the curriculum forward, the movement has been piecemeal and disjointed. With still other projects in process, the curriculum of many schools might become a "crazy quilt" of brilliant alphabetical bands insecurely set in drab misfits of old cloth.

Some participants in the Conference on Curriculum Content labeled as today's greatest curriculum need that of more adequate and comprehensive models of curriculum design which would fit into proper place and relationship the "blocks" of new content emanating from the projects. Indeed it was suggested that ASCD should take the lead in creating such models.²²

A number of broad proposals have been published since 1963; see for promising examples of these:

1. William M. Alexander, ed., *The High School of the Future: A Memorial to Kimball Wiles* (Columbus, Ohio: Charles E. Merrill Books, Inc., 1969), for several proposals by various authors as to the high school program of the future.

2. Louise M. Berman, *New Priorities in the Curriculum* (Columbus, Ohio: Charles E. Merrill Books, Inc., 1968), for eight priorities to develop "process-oriented" persons, and means of planning the needed curriculum organization.

²¹ See Education USA Special Report, *Sex Education in Schools* (Washington, D.C.: National School Public Relations Association, NEA, 1969) for a review of sex education as it was in 1969, and an extensive bibliography.

²² William M. Alexander, *Changing Curriculum Content* (Washington, D.C.: Association for Supervision and Curriculum Development, NEA, 1964), p. 19.

3. Harry S. Broudy, B. Othanel Smith, and Joe R. Burnett, *Democracy and Excellence in American Secondary Education* (Skokie, Ill.: Rand McNally & Company, 1964), for a comprehensive theory of a curriculum for general education involving an organization of content into symbolic skills, basic sciences, developmental studies, value exemplars, and social problems.

4. Mario D. Fantini and Gerald Weinstein, *The Disadvantaged: Challenge to Education* (New York: Harper & Row, Publishers, 1968), especially Chapter 10, "Toward A Relevant Curriculum."

5. Norman K. Hamilton and J. Galen Saylor, *Humanizing the Secondary School* (Washington, D.C.: Association for Supervision and Curriculum Development, NEA, 1969), for several statements relating to curriculum design problems.

6. J. Cecil Parker and Louis J. Rubin, *Process as Content* (Skokie, Ill.: Rand McNally & Company, 1966), for a provocative argument to make learning processes basic curriculum content.

7. Philip H. Phenix, *Realms of Meaning: A Philosophy of the Curriculum for General Education* (New York: McGraw-Hill, Inc., 1964), for an interpretation of the role of the disciplines in the curriculum for general education.

To our knowledge, none of these proposals has as yet been thoroughly tested or implemented; the subject design persists and perhaps it will continue to be updated and otherwise modified as we now describe. The quest for other designs indicates that there is not unanimous satisfaction with it, and defensible proposals undoubtedly stimulate continued evaluation of the dominant design and provoke experimentation with others.

Changing Content and Organization in the Subjects

In another publication, two of the present authors described the curriculum movement of the post-Sputnik period as "ferment in the subject fields" and summarized the reasons for this "ferment" as follows:

1. A general uneasiness about our national position coupled with a certainty as to education's important role in our nation's destiny inevitably focused on the school curriculum, especially the subject fields.

2. The demands for better-trained scientists along with critical comparisons of the status of science, mathematics, and engineering in American and Russian schools caused critical examination as to where and how the related disciplines are taught, as well as strong criticism or rejection of any curriculum plans which delayed or tended to put into second place these subject fields.

3. The impetus given to certain subjects, notably science, mathematics, and modern languages, stimulated curriculum planning first in these fields and then in the others which are inevitably competitive for a place in the curriculum sun.

4. The ever-increasing amount of knowledge, as well as the frequent changes in knowledge brought about by new research findings, brings forcibly to the attention of citizens and educators the gap between what is known and what is taught.

5. New technological developments, especially educational television, audiovisual aids, and programmed instruction, have been regarded as great resources that permit greater depth in the subject fields and more effective teaching procedures.²³

A few years later we would add only one reason, this the factor increasingly operating in continuing searches for new content: the need for organizations and sequences of content that would be more effective than past ones in their utilization for learning by students whose interests and/or skills for acquiring knowledge are relatively poor.

These factors produced the *national curriculum project* as the method (see Figure 13) of developing a new approach to defining curriculum content. More than 100 of these projects were identified in the various publications of the Commission on Current Curriculum Developments, Association for Supervision and Curriculum Development, during the years 1964-1968; many of these projects were still actively developing curriculum plans and materials in 1971, and an uncounted additional number of projects were in various stages of development. Each project typically aims at the content of one subject field, from a single year's course to the entire period of schooling; it is financed by the federal government and/or an educational foundation, and may involve contributions of state and local funds, too; it utilizes the services of university scholars in its field and sometimes help from secondary school educators, also; it results in materials for use in the schools, and frequently in programs of teacher education, usually of an in-service nature. The process of cur-

²³J. Galen Saylor and William M. Alexander, *Curriculum Planning for Modern Schools* (New York: Holt, Rinehart and Winston, Inc., 1966), pp. 302-303. Other sources students can turn to for full descriptions of the curriculum reform movement include: William M. Alexander, *Changing Curriculum Content* (Washington, D.C.: Association for Supervision and Curriculum Development, NEA, 1964); Forrest E. Conner and William J. Ellens, eds., *Curriculum Handbook for School Administrators* (Washington, D.C.: American Association of School Administrators, 1967); Robert S. Gilchrist, Chen, *Using Current Curriculum Developments* (Washington, D.C.: Association for Supervision and Curriculum Development, NEA, 1963); John I. Goodlad with others, *The Changing School Curriculum* (New York: The Fund for the Advancement of Education, 1966); Robert W. Heath, ed., *New Curricula* (New York: Harper & Row, Publishers 1964); Glenys G. Unruh, ed., *New Curriculum Developments* (Washington, D.C.: Association for Supervision and Curriculum Development, NEA, 1965); Glenys G. Unruh and William M. Alexander, *Innovations in Secondary Education* (New York: Holt, Rinehart and Winston, Inc., 1970); and Glenys G. Unruh and Robert R. Leeper, *Influences in Curriculum Change* (Washington, D.C.: Association for Supervision and Curriculum Development, NEA, 1968). Each of these sources also includes detailed lists of references to publications of or about the various projects.

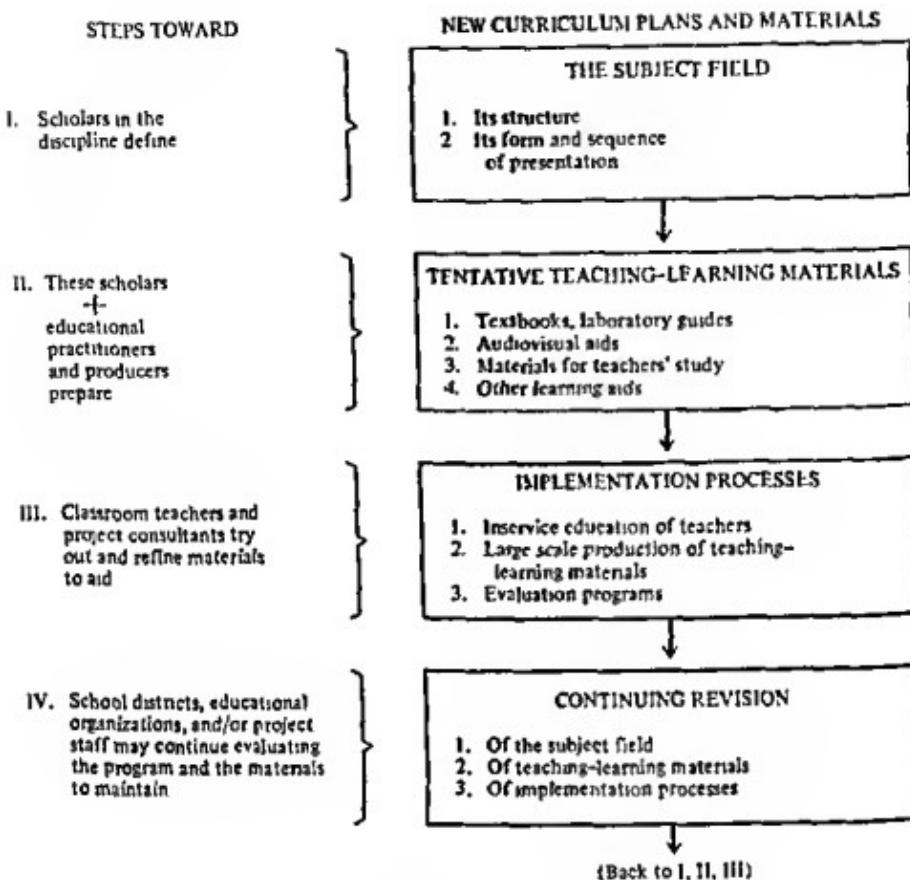


Figure 13. The National Curriculum Project method of curriculum development.

riculum development involved has typically followed the formula stated by leaders of one of the earliest and most influential projects, the Physical Science Study Committee, as follows:

The process of determining the precise boundaries of the unit that will be treated

The process of identifying the subject matter which is to be dealt with within that educational unit

The embodiment of that subject matter in material form, as text, laboratory, or classroom materials, and other learning aids

The preparation of teachers in the new subject matter and in the use of the materials²⁴

²⁴ Jerrold R. Zacharias and Stephen White, "The Requirements for Major Curriculum Revision," in Heath, p. 69.

Although the national curriculum projects have differed in their subject focus, their comprehensiveness, and their impact on curriculum and instructional practices, certain characteristics seem common:

1. The central focus of most projects is on the selection of basic concepts, principles, and processes—the structure of the subject—and on the most meaningful presentation possible of this structure.²⁵
2. The projects generally aimed first at academically talented students; later revisions and newer projects have given more consideration to the less academically inclined ones.
3. The students' learning processes have received increasing attention, with many projects building into their plans opportunities for students to use inductive thinking approaches to learning.
4. "Packaging" of instructional programs either by the projects or, subsequently, by publishers has attempted to make use of a variety of learning aids correlated to the central structure of the program, and increasingly various types of individualized instruction are facilitated.

We may now briefly identify major trends in selecting and organizing knowledge in the four most frequently required fields (English, mathematics, science, and social studies) of the high school curriculum, and also even more briefly, other high school subjects. It is the authors' expectation that students interested in learning about trends in any field will turn to the sources we cite in our footnotes and end-of-chapter references, and to many other sources on individual subjects and curriculum projects. For us to do more than the capsule-type annotations in this chapter is beyond the purpose and space of our book.

English

Although English was slower to be affected by the national project approach than science and mathematics, searches for new content and organization were well under way toward the end of the 1960s. The need for change had been highlighted by a study of the National Council for Teachers of English revealing findings summarized in part as follows:

There is little direct instruction in writing despite the fact that 16 percent of class time in the studied schools is devoted to composition. Reading programs are "inadequate, uncoordinated, and almost non-

²⁵ See for further development of the emphasis on structure: Jerome S. Bruner, *The Process of Education* (Cambridge, Mass.: Harvard University Press, 1960), and *Toward A Theory of Instruction* (Cambridge, Mass.: Harvard University Press, 1966); G. W. Ford and Lawrence Pugno, eds., *The Structure of Knowledge and the Curriculum* (Skokie, Ill.: Rand McNally & Company, 1964); Stanley Elam, ed., *Education and the Structure of Knowledge* (Skokie, Ill.: Rand McNally & Company, 1964); and Joseph J. Schwab, *The Teaching of Science* (Cambridge, Mass.: Harvard University Press, 1962).

existent." There is widespread neglect of the nonacademic, noncollege, slow-learning student. Although contemporary literature is more significant and relevant to students, a majority of the schools studied "tend deliberately to deemphasize major 20th century American fiction in order to avoid embarrassing problems of public relations and threatened censorship." Language is the least well taught of all elements of the English curriculum. "Few teachers show themselves capable of effectively leading class discussion." Effective communication is usually subordinated to grammatical accuracy in classroom presentation.²⁸

The change in the philosophy of English instruction moves away from formal grammar, composition exercises, and literary analysis to more positive and interesting approaches to language, literature, and composition as closely related aspects of the subject. These three aspects of English have come to be regarded as integrally related, with each to be taught throughout the English program rather than by some plan of alternation or artificial sequence of grammar, composition, and literature. The following points of agreement as to important new directions in the teaching of English reached at the Anglo-American Seminar on the teaching of English held at Dartmouth College in 1966 summed up much of the investigations of past years and the future steps needed:

1. The centrality of the pupil's exploring, extending, and shaping experiences in the English classroom
2. The urgency of developing classroom approaches stressing the vital, creative, dramatic involvement of children and young people in language experiences
3. The importance of directing more attention to speaking and listening experiences for all pupils at all levels, particularly those experiences which involve vigorous interaction among children
4. The wisdom of providing young people at all levels with significant opportunities for the creative uses of language: creative dramatics, imaginative writing, improvisation, role playing, and similar activities
5. The significance of rich literary experiences in the educative process and the importance of teachers of English restudying particular selections to determine their appropriateness for reading at different levels
6. The need to overcome the restrictiveness of rigid patterns of "grouping" or "streaming" which limit the linguistic environment in which boys and girls learn English and which tend to inhibit language development
7. The need to negate the limiting, often stultifying, impact of examination patterns which direct attention of both teachers and pupils to aspects of English which are at best superficial and often misleading
8. The compelling urgency of improving the conditions under which English is taught in the schools: the need for more books and libraries, for

²⁸ Editors of *Education USA, The Shape of Education for 1969-70* (Washington, D.C.: National School Public Relations Association, June, 1969), pp. 18-19.

better equipment, for reasonable class size, for a classroom environment which will make good teaching possible

9. The importance of teachers of English at all levels informing themselves about the results of pertinent scholarship and research so that their classroom approaches may be guided accordingly

10. The need for radical reform in programs of teacher education, both preservice and in-service

11. The importance of educating the public on what is meant by good English and what is meant by good English teaching²⁷

Mathematics

Reform in mathematics began early in the 1950s; the first national curriculum project, that of the University of Illinois Committee on School Mathematics, was begun in 1951. The "new" mathematics has been more widely discussed than any other curriculum innovations, and the projects in this field may have had most impact. A survey by the Educational Testing Service reported in 1969, indicated that the "recommendations of the new experimental programs had begun to permeate the mathematics program" of the sample of students taking a College Board Achievement Test in mathematics and also that "some of the recommended topics were being integrated into the program rather than being attached in a superficial way." Specifically, this survey found that:

A number of the topics that are considered to exemplify contemporary mathematics were studied by more than half of the students in the sample. For example, elementary analysis including elementary functions had been studied by more than four-fifths of the students.²⁸

The approach to mathematics knowledge incorporated in the new programs has generally stressed learning and use of mathematics rather than memorization. New topics suggested in the preceding quotation and others are essential, and so is the emphasis on the student's own experience in using mathematics. The newer programs generally emphasize a progression from concrete to symbol to abstract and involve the use of many experimental materials and physical models in the classroom.

Science

Science as well as mathematics was a focal point of attack in the beginning years of the curriculum reform movement, with major projects

²⁷ Albert H. Marchwardt, "The Dartmouth Seminar," *The Bulletin of the National Association of Secondary School Principals*, 51:104-105 (April 1967).

²⁸ Irene Williams, *A Survey of the Teaching of Mathematics in Secondary Schools*, (Princeton, N.J.: Educational Testing Service, 1969), p. 13.

in physics, chemistry, and biology. The following generalizations described the goals of these and several subsequent projects:

What are the major changes in science education? Away from and toward what? The old science programs usually relied on a single textbook which emphasized factual information, sometimes in such extensive encyclopedic treatment that students were overwhelmed. Most textbook authors organized the information around classification. A laboratory manual was usually provided to students, but laboratory work in science tended to be after-the-fact verification. Much emphasis was given to practical applications to daily living.

In the new science programs, the processes of science are emphasized, and process and knowledge are considered to be inseparable. Conceptual schemes in science are the unifying themes, and many concerns and principles are introduced that were not included in traditional programs while much descriptive and irrelevant material has been eliminated. The new programs are laboratory-centered with opportunities for students to approach frontiers of science, to investigate unknowns. Serious attempts are made to develop skills of inquiry and investigation.²⁹

Several apparent weaknesses of the early projects have generated additional efforts to develop new approaches in science. The first projects were in single, one-year courses; more attention is now being given to the development of total science programs. The first programs were largely focused on college-bound students; newer ones aim to interest other students in science. Some criticisms of the extensive laboratory work are producing adaptation of methods and equipment. A project described in 1968 as "the nation's largest effort to produce an integrated science curriculum" is being developed by the Educational Research Council of America to meet all these problems:

The ERC science staff is working on a 10 to 12 year project to produce an interdisciplinary science curriculum, including materials appropriate to meet the needs of all children from kindergarten through the twelfth grade. This curriculum will also deal with the interfaces between science, mathematics, social science, technology, and the humanities.³⁰

Perhaps a next step in science and mathematics is the development of an interdisciplinary approach. Reporting on a symposium sponsored by the Cambridge Conference on School Mathematics, Gleason stated that a major agreement was to think not in terms of coordinating mathematics and science instruction but in terms of integrating them:

Instead of having separate mathematics and science classes trying to keep pace with each other, we want a single class devoted to both

²⁹ Unruh and Alexander, p. 59.

³⁰ Claude Gatewood, "The Science Curriculum Viewed Nationally," *The Science Teacher*, 35:21 (November 1968).

subjects and emphasizing at any particular time whichever discipline seems appropriate.³¹

Social Studies

Although national curriculum projects were slower to develop in this field, some 50 of them had emerged by 1967, most in individual social sciences. The field seemed to be on the verge of a major change at the turn of the 1960s; in a 1970 publication, Unruh and Alexander cited these characteristic features of the new social studies:

1. In a new approach to content, conceptual structures and major generalizations are emphasized rather than accumulation of facts and details as ends in themselves. Chronological surveys are giving way to depth studies focused around problems and concepts.
2. Skills of inquiry, intellectual processes, and analytical modes of thinking are emphasized. Process, inextricably interrelated with content, is designed to develop understanding and to lead students to search for solutions to problems.
3. More sophisticated group processes are being devised to direct interaction toward resolution of conflict and cooperative efforts. Students are coming to grips with controversial and vital issues of the present day.
4. The issue of values is being treated rationally and analytically, and directed toward the development of responsibility for self and others, for a world view and international understanding, and for the society close at hand.
5. Inservice education for teachers is being built into the dissemination of new social studies programs. Teachers are expected to develop new methods of teaching: methods that achieve student involvement, curriculum relevance, and intellectual inquiry. Not only familiarity with current social problems, but familiarity with adolescent subcultures is demanded of the social studies teacher.³²

In another review of the field, Fraser in 1969 cited these central trends:

1. Importance of history declines
2. Economic emphases accelerate
3. U.S. gives way to a world view
4. Instructional materials turn multimedia
5. Process approach gains momentum

She also suggested that the use of "process as content" might become the most significant aspect of the search for relevancy, noting that:

In a program that uses a conceptual approach in establishing

³¹ Andrew Gleason, "The Interface of Science and Mathematics," *The Bulletin of the National Association of Secondary School Principals*, 52:118 (April 1968).

³² Unruh and Alexander, pp. 69-70.

scope and sequence, the main criteria for content will be: Will study of this topic or subject help the student increase his command of the basic concepts, generalizations or processes that have been chosen for emphases at this grade level?²³

The trend to include so-called "black studies" which we cited earlier adds another content organization to the social studies area, generally that of Afro-American history. In the new offerings of this subject in Detroit, for example, where there were 41 senior high school and 73 junior high school classes in it during 1967-1968, the objective cited was "to help Negro children develop a positive self-image as they learn about themselves and their race and to help non-Negro children develop a realistic image of the Negro."²⁴ Here and in the other cities developing such courses, the focus of content selection and organization is on the role of the Negro in American history; materials generally lacking for such a course or emphasis have recently been rapidly developed by publishers.

That these trends had not as yet substantially affected the high school curriculum was evidenced by a survey of students taking College Board Achievement Tests reported in 1969. The pattern of courses taken by college-preparatory students was the traditional one, and the report concluded that "the various new curriculum projects currently being undertaken in the social studies appear to have had little impact on student preparation throughout the country as far as college-bound students are concerned."²⁵

Other Subject Fields

Significant change in the selection and organization of knowledge is occurring in the elective subject areas, too. Some central tendencies only are briefly identified in the following paragraphs:

Art. The following types of programs are currently being offered or developed in high school art education: (1) studio approach, in which the teacher introduces media, develops the skills required, and sets up some organizing problem or theme for students' work; (2) historical-critical approach aimed at developing understandings of the role of art in human culture and critical abilities; (3) creative design approach using various media and forms to foster creative designing; and (4) humanities-

²³ Dorothy M. Fraser, "Social Sciences," in "What's New in Curriculum," *Nation's Schools*, 84:31 (July 1969).

²⁴ Cited as statement by Dr. Elmer Pfleifer, division director, social studies curriculum, Detroit Public Schools, in Taye McEckern, "Afro-American History: Schools Rush To Get in Step," *Nation's Schools*, 82:61 (September 1968).

²⁵ Elizabeth G. Kimball, *A Survey of The Teaching of History and Social Studies in Secondary Schools* (Princeton, N.J.: Educational Testing Service, 1969), p. 4.

based program involving experience in the several arts and their relationship to man's accomplishments and problems.

Business education. New developments in automation, especially those relating to electronic data processing, are changing some content in business education as well as the machines with which students work. General education objectives are also reflected in content of business education courses that may increasingly deal with basic economic concepts, knowledge for consumers, and business operations, banking services, and tax problems.

Foreign languages. The widespread installation of electronic language laboratories has facilitated the use of the audiovisual method of teaching foreign languages with its focus on comprehending and speaking. Use of this method and purpose has not been wholly accepted nor completely satisfying even to its advocates, and for the 1970s, balanced approaches including listening, speaking, writing, and reading the language, with some attention to its cultural and linguistic backgrounds, were being developed.

Health and physical education. The physical fitness emphasis stimulated by the President's Council on Youth Fitness was central in the physical education programs of the 1960s. The concept of human movement has been used as a framework for physical education activities designed to accomplish physical, social, and cognitive development. Most noteworthy of recent developments is increasing attention to leisure activities which can be continued in adult life and also to corrective and individualized programs. The inadequate status of health education in the schools was revealed by the School Health Education Study in 1963, and this project developed a conceptual design for health education which received wide attention.⁵⁶ Problems of drugs, alcohol, tobacco, venereal diseases, and sex behavior have also stimulated various organizations of health education programs.

Home economics. The conceptual framework for recent home economics curriculum development has included five phases: (1) human development and the family; (2) home management and family economics; (3) food and nutrition; (4) housing; and (5) textiles and clothing. Accordingly, such topics as these have been included: family patterns of different cultures; the family economy and the larger economy; cultural and socio-economic influences on food patterns; consumer legislation; housing standards, selection financing, and maintenance. Human development courses frequently operate in conjunction with nursery school programs. Other

⁵⁶ School Health Education Study, *Health Education: A Conceptual Approach to Curriculum Design* (St. Paul, Minn.: 3M Education Press, 1967).

innovations include specialized courses on specific phases of home economics and work-training courses for occupational home economics.

Industrial arts. Recent changes in the content of industrial arts courses include focus on various concepts of our industrial society; principles and concerns of modern industrial production, applications of mechanics, methods of production, influence of automation on labor and economics, and exploration of methods of creating new ideas and products. Theory and laboratory work are interrelated.

Music. Emphasis in music for performance groups has turned from rote music to the content, structure, and style of the music being performed. Contemporary music has received increasing attention, with musical discrimination stressed in appreciation courses. The study of folk music and its relation to American history, of jazz, and electronic music is included in some current courses, although the issue of traditional versus contemporary music is far from settled. The so-called "Tanglewood Declaration" produced by the Tanglewood Symposium of the Music Educators National Conference in the summer of 1967 resolved the issue in these words:

Music of all periods, styles, forms, and culture belong in the curriculum. The musical repertory should be expanded to involve music of our time in its rich variety, including currently popular teen-age music and avant-garde music, American folk music, and the music of other cultures.³⁷

Vocational education. The Federal Vocation Education Act of 1963 and the Vocational Education Amendments of 1968 aimed to bring about major expansion and reorganization of this field. These acts were intended to help vocational education respond to rapidly changing employment conditions and to serve youth of all levels of ability, including those with socio-economic, educational, and other handicaps. The 1968 Amendments especially encouraged such innovative developments as broad occupational orientation for all junior high school students, expanded work-study programs, short courses for job-changers, job placement services in schools, and special programs for disadvantaged and physically handicapped students. These programs were getting well underway in 1971, and it appeared hopeful that long-needed improvements, including much increased student enrollments might be just ahead.

³⁷ Cited in *The Shape of Education for 1969-70*, p. 57. Also see Judith Murphy and George Sullivan, *Music in American Society: An Interpretive Report of The Tanglewood Symposium* (Washington, D.C.: Music Educators National Conference, NEA, 1968).

The Knowledge Industry and the Curriculum

Curriculum development in the 1960s was paralleled by a movement of publishers and industries producing (or planning to produce) educational materials, both software and hardware, included in so-called "curriculum (or learning or instructional) packages (or packets or kits)." These packages provide a variety of teaching-learning materials and aids related to some selection of curriculum content. The total annual expenditures for education, and especially new federal appropriations augmenting these expenditures, and the relative lack of technology in schools, had made the education market appear attractive enough for a host of mergers of book publishers, manufacturers of audiovisual equipment, electronics firms, and other industries. *Barron's* reported in October 1966 that a trade paper had counted "no less than 120 mergers and combines set up to exploit the education market." Others have since occurred. As this book went to press, many new products were on the market, others were still in process of development, and some of the new "knowledge" or "learning" industries had already withdrawn. One review of these developments noted that "one of the mistakes such industries have made was the naive supposition that simply uniting the conventionally oriented publishers of the past with electronically oriented firms of today would somehow bring the systems approach into education" but concluded "that if both industry and education recognize the nature of their convergence, and if the government commits itself to endow this marriage between educational technology and industry, the necessary revolution in American schools will almost inevitably occur."³⁸

Several lines of current development will need to be clearly related if not unified for the use of commercially produced curriculum packages to become widespread. First to be noted is the development within some few schools of their own learning packages, really detailed curriculum guides for teachers and students. For example, the Learning Activity Package is defined at Nova High School, Fort Lauderdale, Florida, as follows:

The Learning Activity Package is basically a management system for learning which allows the student, through a multi-media opportunity, to become involved in a diversity of learning experiences. As a student works his way through a LAP, he shares in developing his own private path of comprehension.

The Learning Activity Package is much more than a student unit; it is a sophisticated educational instrument. Within the LAP's content is structured: rationale, specific performance objectives, provision for self assessment, options for depth study, and definitive teacher evaluation. Interrelated subunits of important information keep attention directed

constantly toward the main concept which is to be assimilated during such co-directed learning experience.²⁸

The use of such guides in individualized instruction is described in detail in our Chapter 10; for present purposes, it is to be noted that the locally produced guide may be dependent on commercially produced materials for learners, but rarely would the separately designed guide and packet coincide in focus and scope. In effect, the local guide would organize various learning materials to serve the purposes of particular learners in a particular school. Such well-conceived plans would appear to be far more relevant to the needs of a particular school population than any organization of materials planned elsewhere.

In the second place, publishers and their affiliates have already been supplementing textbooks with various teaching-learning aids: teachers' guides, film strips, slides, films, recordings, tests, teacher-training films, transparencies for the overhead projector, and tapes. The classroom and especially the library may be equipped not only for use of printed sources, but for microfiche, cassettes, tapes, films, and other knowledge sources available even by dial-access, push-button controls. These sources may be purchased commercially or made within the school; probably some of each type are desirable.

Thirdly, computer storage and television both as telecast and as video recorded, make possible great stores of knowledge that can be utilized as needed. Past experimentation with television has largely failed to take full advantage of this medium. Current experimentation with computer-assisted instruction and with knowledge-retrieval systems is largely in the research and development stage, but offers much promise of aiding in individualized learning activities. When and as knowledge can be called up by push button as needed, sets of preorganized presentations may become obsolescent.

As we see it, the dilemma (see Figure 14) schools face is due, in considerable part, to a confusion of uses of both software and hardware. One group of uses has to do with the central purpose of providing as complete and rapid access to knowledge as possible—here both storage and packaging of content is involved as well as the problems of organizing it treated in this chapter. Schools are dependent on publishers, libraries, media, knowledge storage and retrieval systems to accomplish this purpose. Another category of uses of materials, media, technology has to do with student learning and instructional methodology. In these matters, the knowledge industry is dependent on the schools as to what will be effec-

²⁸ Gabriel D. Ofiesh, "The New Education and the Learning Industry," *Educational Leadership*, 26:760-763 (May 1969).

²⁹ Charles E. Pipes, "Introduction," *The L.A.P. At Nova* (Fort Lauderdale, Fla.: Nova High School, Summer 1968), p. 1.

content with greatest sales possibilities and ignore the optional patterns. But packages that can be used on individualized and optional bases—not relying on a single sequence for all—might greatly advance curriculum planning and instructional strategy toward focus on the individual student. We turn now to more direct consideration of this focus—as curriculum individualization.

Additional Suggestions for Further Study

1. Begle, Edward G., ed., *Mathematics Education*. The Sixty-ninth Yearbook of the National Society for the Study of Education; Chicago: The University of Chicago Press, 1970. See for a comprehensive treatment of mathematics education, historical background and psychological bases, curriculum content and methodology, and various special problems and areas including teacher education, evaluation, differentiated instruction, and administration and supervision.
2. Draper, Dale E., *Educating for Work: A Report on the Current Scene in Education*. Washington, D.C.: The National Association of Secondary School Principals, 1967. This report for the NASSP's National Committee on Secondary Education, and including the Committee's conclusions, is a forward-looking view of vocational education and the high school.
3. Eurich, Alvin C., ed., *High School 1980: The Shape of the Future in American Secondary Education*. New York: Pitman Publishing Corporation, 1970. This collection of chapters by various authors deals with many of the issues treated in our Chapter 12; see especially for more extensive treatment of certain curriculum elements Chapters 10-15 on, respectively, science, mathematics, English, social studies, foreign language, and vocational education.
4. Fenton, Edwin, *The New Social Studies*. New York: Holt, Rinehart and Winston, Inc., 1967. Surveys the projects and developments aiming toward a new social studies and describes the emerging curriculum objectives, teaching strategies, and materials.
5. Foshay, Arthur W., *Curriculum for the 70's: An Agenda for Invention*. Washington, D.C.: Center for the Study of Instruction, NEA, 1970. Proposes for the "Schools for the 70's" series a three-way curriculum classification, with major reforms to be effected in his Curriculum I (the traditional academic one), and with full implementation of heretofore neglected Curriculum II (curriculum of social experimentation) and Curriculum III (curriculum of self-awareness and self-realization).
6. Hays, David G., ed., *Britannica Review of American Education*. Volume I, 1969. Chicago: Encyclopedia Britannica, Inc., 1969. See articles on science, English, music, and social studies, and also on curriculum development, for reviews of these aspects of the high school curriculum.
7. Matekwardt, Albert H., ed., *Linguistics in School Programs*. The Sixty-ninth Yearbook of the National Society for the Study of Education; Chicago: The University of Chicago Press, 1970. See especially Chapter VII on "Language Development in the School Years" for a review of research on language development and Chapter X on "Linguistics and Literature."
8. "Minority Cultures in the Curriculum," *Bulletin of The National Association of Secondary School Principals*, 54:1-154 (entire issue, April 1970). Most articles deal with problems of and approaches toward increased curriculum content dealing with minority cultures, especially the Negro culture, in relationship to the social studies field.

9. Oettinger, Anthony G., with Sema, Marks, *Run Computer Run*. Cambridge: Harvard University Press, 1969. Takes a dim view of present use of technology in education, indeed of innovations in general, although he holds out some prospect of future more effective use.
10. "Projects, Packages, Programs," *Educational Leadership*, 27:761-872 (entire issue, May 1970). An especially useful editorial by Glenys G. Unruh, "Can I Be Replaced by a Package?" defines and analyzes current curriculum and instructional packages, and introduces a series of articles relating to using and evaluating the packages.
11. Seguel, Mary Louise, *The Curriculum Field: Its Formative Years*. New York: Teachers College Press, Columbia University, 1966. Analysis of the ideas and impact on curriculum design and development of the McMurrays, Dewey, Bobbitt and Charters, Rugg, and Caswell.
12. Witt, Paul W. F., ed., *Technology and the Curriculum*. New York: Teachers College Press, Columbia University, 1968. Contains nine papers relating to the theme of the 1967 Curriculum Conference at Teachers College, "Technology and the Curriculum." Hubert M. Kleibard's "The Curriculum Field in Retrospect" is especially relevant to our Chapters 6 and 7.

CHAPTER 8

Curriculum Individualization in the High School

Throughout the twentieth century, educators have been searching for ways and means of providing more effectively for the seemingly ever-widening range of individual differences among high school students described in Chapter 3. These provisions frequently appear as innovations, are tried out, spread, modified, sometimes dropped, and later, perhaps, revived, again as innovations rather than the renovations they really are. Thus what was simply called "ability grouping" at one time may at another be "phasing"; or "contracts" in one school or era may be "curriculum prescriptions" in another. But the search for individualization is a never-ending one, and essentially new plans are developed from time to time.

Varying social and educational developments detailed in the early chapters of this book have made ever more desirable a focus of education on the individual student. As the student body of a high school increases in size, it is the tendency, a thoroughly undesirable one, for the individual student to appear more and more a number and less and less a unique person known by his associates as an individual. This trend toward anonymity of the individual is generally regarded as a factor in the student unrest movement that erupted in higher and secondary education in the late 1960s.¹

As numbers increase, the range of differences of all types generally widens, and in this same era there is every pressure from our society for all youth to complete high school. Paralleling these factors, and fortunately so, advances in technology, educational planning, and teacher education

¹ See Education USA Special Report, *High School Student Unrest* (Washington, D.C.: National School Public Relations Association 1969) for an account and analysis of the unrest movement in high schools.

make possible types of individualization heretofore unknown or little used. We have available the means to make for an individualization that should end the feeling of anonymity and, hopefully, the unrest this stimulates.

Many approaches to individualization are instructional, having to do with arrangements made in the instructional situation by teachers for particular students. These we describe in Chapter 10. Many other approaches have to do with the program opportunities, their offering and organization, or curriculum of the high school. These we describe herewith.

Options for the Individual Student

The high school, much more than the elementary school with its traditional graded and uniform curriculum, has long had a measure of individualization through the options available to students. Although many of these options may be only theoretically available to individual students because of such controls as counseling, eligibility rules, schedules, and college entrance requirements, the fact remains that in all but very small or very poor high schools students have many choices to make. Some common ones are briefly described below.

Multiple Schools and Teachers

As early as the days of the academy, first established in the eighteenth century, some American communities have had more than one type of high school for their youth to attend. Religion or the family's financial status might control the choice between public and nonpublic high schools, academic status that between public academic and vocational high schools, but the choice has existed for many.

Within the more numerous and popular comprehensive high schools, various plans have been used to offer students a choice in their programs of studies. Optional programs of studies, or multiple tracks, or patterns for counseling, whatever these options may be called, have typically included college preparatory, vocational, and general programs. The vocational area is usually subdivided into several specialties. Many educators and others have strenuously objected to the "track" idea as undemocratic in its effect of having more and less prestigious alternatives in which students might become fixed. Use of the tracking idea in relation to ability and achievement levels has, in particular, been challenged, and such a four-track system in Washington, D.C., was declared unconstitutional in a 1967 decision of the Federal District Court. In 1969, at Hyde Park High in Chicago's inner city, the track system was abolished following a near-riot at the school, and 21 new courses were established centering on work-study programs and the humanities.

In general, we see present practice as tending away from rigid classification of students into general tracks which control their election of

subjects. However, the notion of the academic respectability of certain subject areas and their requirement for college entrance tends toward maintenance of a somewhat inflexible program of studies considered and called the "college preparatory program." This inflexibility, in part, has generated a different type of school which we now note.

Alternative Schools

Although many communities have long had nonpublic schools of many types (see Chapter 1), new alternatives were being established quite widely in the early 1970s. The number of youth actually involved is not known but is, of course, a small minority of the total high school population. These schools, variously called "free," "independent," "experimental," and otherwise, in common represented a reaction, perhaps a revolt, against the public school. Operating at all levels, and undoubtedly below the university influenced by the earlier "free university" movement, these schools accommodated such diverse purposes as aid to dropouts, challenge to able students, advancement of intercultural integration, avoidance of recent desegregation, individualized instruction, and multilingual education.

The somewhat unpredictable, unstable, but varied nature of these schools is indicated in the following description:

The new schools charge little or no tuition, are frequently held together by spit and string, and run mainly on the energy and excitement of people who have set out to do their own thing. Their variety seems limitless. Not two are alike. They range from inner-city black to suburban and rural white. Some seem to be pastoral escapes from the grit of modern conflict, while others are deliberate experiments in integrated multicultural, multilingual education. They turn up anywhere. . . . They have crazy names . . . that for all their diversity reflect the two things most of these schools have in common: the idea of freedom for youngsters and a humane education.²

Our judgment is that such alternative schools will have continuing appeal to some parents and youth, but may not attract large enrollments or replace existing high schools as the latter improve.

The Elective System

The elective system of the high school is its historical and still predominant method of providing choices for students. Although the really small high school of less than 100 students may offer virtually no elective

² Bonnie Barrett Stretch, "The Rise of the 'Free School,'" *Saturday Review*, June 20, 1970, p. 76. See also Donald W. Robinson, "Alternative Schools: Challenge to Traditional Education," *Phi Delta Kappan* 51:374-375 (March 1970).

subjects, other schools list many electives with the very large high school serving several thousand students offering as many as 200 different courses.

Typically, about half of the year-long courses taken in grades 9-12 are required: English, 3; social studies, 2 or 3; mathematics, 1 or 2; science, 1 or 2; and physical education, 1 to 4. There may be optional courses to fulfill some of these requirements, especially in science and mathematics. The other half of the required number of credits is elective although, as noted above, college entrance interests may dictate that most of these electives be chosen from the standard college preparation areas. Even so, most students have a choice as to whether to take a foreign language and what language, whether to elect one or more courses in the arts and prevocational areas, and whether to take additional courses and which in English, mathematics, science, social studies, and health and physical education.

Extrainstructional Opportunities

Almost all of the array of extrainstructional opportunities offered by the modern high school are optional. The student generally may choose whether to participate in the athletics, clubs, contests, publications, and social programs of his school, and in which of these to participate. However, his choices may be restricted if he is not able because of transportation or after-school jobs to stay for activities meeting after school hours, or if he does not meet scholastic or other eligibility requirements for particular activities.

Even the guidance and other special services of the high school are somewhat optional; that is, the student may or may not seek on his own help from a counselor or other special services person at the school.

Special Programs and Schedules

Many high schools work out programs of study and schedules for individual students whose health, work responsibilities, or home conditions demand special consideration. In addition to these kinds of options, many high schools provide work-study programs and an increasing number help interested students make travel-study arrangements.

The entire summer high school program has been on an optional basis. Once primarily used for make-up purposes, summer school is increasingly used for taking additional courses that get crowded out in a college preparatory program. Interest continues, too, in year-round school operation with a portion elective for students; thus the four-quarter plan initiated by six school districts of the Atlanta metropolitan area in 1968-1969 made fourth-quarter attendance optional. It could be used to accelerate graduation, as well as for the usual enrichment and make-up purposes.

Student-directed Programs

We described in Chapter 6 some practices and possibilities of student-directed periods, days, and weeks. The student unrest movement has brought new recognition of students' need for responsible involvement in planning and directing their own educational program. There should be many more innovations developed in large part by students. Programs which they themselves direct seem to us to represent the most complete opportunity for students to exercise responsible options. An example of such a program at the Murray Road Annex to Newton High School, Newton, Massachusetts, was described in the following statement by Andrew Narva, a student in the school:

The school we go to is an annex of a public high school and it is not located in the same building. We are located in what used to be an elementary school building. There are 114 students and seven teachers. The annex has been in existence since the fall of 1967. We have no grades and we try to operate as a community with everyone joining more or less in equal status with recognition of the fact that the teachers have a certain degree of experience which enables us to use them as resources. The idea of the school is that the students take the responsibility for educating themselves. We have no administrators. Basically the student is supposed to take responsibility for creating his own education, for going out and finding people whom he thinks can help educate him.

We try to utilize all the resources in our community, including the universities in Boston. We have people come in from all over to teach. Not everything happens between the hours of nine in the morning and 3:30 in the afternoon. Sometimes we run from about eight in the morning on to 12 at night, and things can go on anywhere.

All sorts of people teach all sorts of weird courses. We also have college preparatory courses and we have two black history courses. If someone wants a course, he tries to find someone to teach it, and if only one person wants to take it, then he probably can—and he gets credit for it. You can arrange credit for almost any situation.

We have a fairly big tutoring program in which students from our school work with retarded kids in elementary and junior high schools.³

The Options Concept

Glatthorn's description of two basic principles of self-fulfillment is an excellent summation of the options idea in high school:

1. *Multiplicity of alternatives*—". . . man has the greatest chance to develop his unique potential when he has the greatest number of options from among which to choose"; options suggested include: "books to read, models

³ Quoted in National Committee for Support of the Public Schools, *Education for Today's Students* (Washington, D.C.: The Committee, 1969), pp. 33-34.

to imitate, careers to begin, philosophies to adapt, groups to join, subjects to study, clothes to wear, art to enjoy, paths to follow."

2. *Freedom of choice*—"... the individual will achieve true self-fulfillment only as he controls his own destiny by making his own choices"; and Glatthorn adds that it is "absurd to develop a multiplicity of alternatives if we then paternalistically deny the individual the right of self-determination."⁴

As we see it, the continued efforts of high schools to provide a program aiming to help each individual achieve maximum self-fulfillment must result in widening options for the students. These options should be available before they are demanded, we believe—if not, they may have to be made available. Along with a greater "multiplicity of alternatives" in schools needing them, there must also be continuous evaluation of the options in terms of their appropriateness to the individual students concerned, and use of the "freedom of choice" principle requires continuing appraisal of the kinds of counseling, eligibility requirements, and other controls now restricting choices; it also involves extension to students of a considerable voice in evaluating their own choices.

Programs for Special Groups of Individuals

Most twentieth-century efforts to provide for individual differences have resulted in provisions for various categories of students. The most frequent provision has undoubtedly been some type of ability grouping based on levels of intelligence and/or achievement. Thus ability grouping by subjects remains a very common effort toward differentiation of curriculum and instruction; variants of this approach are noted later in this chapter. Additionally, in the high school many other categories have from time to time reflected social and educational recognition of the problems of various special groupings of individuals. For example, categories reflected in the literature of secondary education of past decades, in addition to those we discuss below, include: alienated, average, college preparatory, educationally neglected, handicapped (various categories), life-adjustment, underachievers, terminal, vocational, and others. Here we describe briefly only those categories and programs that were receiving most attention as the 1970s began.

Blacks and Other Cultural Groups

The slow progress of racial desegregation following the Supreme Court decision of 1954 and the surge of black militancy in the late 1960s were accompanied by many efforts of high schools to focus programs on

⁴ Allan A. Glatthorn, "Individual Self-fulfillment in the Large High School," *The Bulletin of the National Association of Secondary School Principals*, 53:48-49 (March 1969).

the needs of black students. These efforts included various types of compensatory education plans generally based on economic rather than racial differences, employment of counselors and other special personnel to work with black students, and many intensive arrangements for opening up opportunities for them in student activities of desegregated schools.

A widespread approach at the turn of the decade was the incorporation of so-called "black studies" in the curriculum for the benefit of both blacks and whites; it was argued that all citizens needed more understanding of the roles, contributions, and problems of American Negroes. A late 1969 review of the movement gave this summary description:

Newer courses recognizing black studies draw from interdisciplinary sources. In English, Afro-American literature and studies of the black writer in America are included. History includes black views of the United States and African contributions to history. The language of the ghetto and study of black speech dialects and black non-verbal communication have become a part of the study of language. In economics, problems of racism in business and labor are considered. Afro-American art and Afro-American music are becoming important forms of the arts. The sociology of the black family, the black social movement, urbanization of blacks, and attention to the status of blacks in various social institutions are a part of the curriculum content.⁵

Although other minority groups are not as widely scattered, numerous, or recently vocal as the blacks, similar interests and emphases have occurred and could reoccur in regard to Spanish-speaking minorities, American Indians, and other cultural groups. The blacks, the Spanish-speaking groups, the Indians, and also the indigent whites of Appalachia have been very heavily represented in the groupings of the disadvantaged to whom we now turn.

Disadvantaged

By the 1970s, the term "disadvantaged" was generally used to refer to individuals whose social and economic status had been previously described by such terms as "culturally deprived," "underprivileged," "lower socioeconomic," "culturally impoverished," "culturally handicapped," "poor," and "educationally disadvantaged." Although a complete concept of cultural advantage and disadvantage could lead one to conclude, as did Fantini and Weinstein's analysis, that "most of us" are disadvantaged,⁶ the curriculum differentiation efforts were almost universally aimed at the

⁵ From Glenys G. Unruh, "Curriculum Innovations," an address at the University of Florida, Gainesville (December 16, 1969).

⁶ See Chap. 1, "Who are the Disadvantaged?" in Mario D. Fantini and Gerald Weinstein, *The Disadvantaged: Challenge to Education* (New York: Harper & Row, Publishers, 1968).

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economically disadvantaged, the group on whose educational assistance Title I of the Elementary and Secondary Education Act of 1965 was specifically focused.

Illustrative of the special programs for the disadvantaged are 150 Title I funded programs described in a publication of the United States Office of Education. A sampling of the types of projects for high school students follows:

Reading improvement

Reading, writing and speech clinic

Vocational English ("a job-oriented lesson series for low-ability pupils who consider literature irrelevant to their needs")

Writing laboratory

Composition writing

Bilingual education for Spanish-speaking students

English as a second language

Mobile laboratories: reading, science, health-social studies, mathematics

Mobile reading clinic

Advanced mathematics (data processing)

Summer day camp and travel program

Summer program in the arts

Delinquency prevention and rehabilitation ("guided group interaction approach")

Psychological services

Group counseling for potential dropouts

Liaison teachers (between home and school and social agencies)

Social work interns (graduate students working with disadvantaged students and the community)

Tutoring (of retarded and under-achieving students)

Negro history classes

Cultural resource center

Living theater (performances by professional actors and singers at inner-city schools)

Cultural enrichment program for delinquent girls

Independent study for potential college students

Ornamental horticulture

Occupational training

Clerical education

Experimental farm

Learn and earn (pay for vocational training)

Evening classes for dropouts

School for pregnant girls

Rival school media center

Summer curriculum development program

Teacher aides

Community school program⁷

⁷ John F. Hughes, Director, *Profiles in Quality Education: 150 Outstanding Title I, ESEA, Projects* (Washington, D.C.: Government Printing Office, 1968).

Undoubtedly many such programs have operated effectively to improve educational opportunities for the disadvantaged. A series of reports on "Successful Compensatory Education Programs" was published by the Division of Compensatory Education, United States Office of Education, in 1969 following an independent study of these performed by the American Institute for Research in the Behavioral Sciences, Palo Alto, California, each with this foreword: "The researchers report this project significantly improved the educational attainment of the disadvantaged children involved. Other communities, reviewing the educational needs of the disadvantaged youngsters they serve, may wish to use this project as a model—adapting it to their specific requirements and resources."⁸ Despite such successful programs, considerable evidence mounted during the first few years of Title I funding that the funds were not always used appropriately and effectively. One widely cited review in 1969 described as "largely unwarranted" the assumption (said to be "almost universal") that Title I "is providing great benefits to educationally disadvantaged children from low-income families."⁹

However funded, the various programs for the disadvantaged focus on one or more of these aims: (1) improvement in needed learning skills; (2) work skills and attitudes; (3) cultural enrichment; (4) solving personal and home-related problems. Many programs with such foci operated before and without Title I funds, and there is hope that many will be continued through the regular budgets of local school districts.

Dropouts

Once the concept of universal secondary education was widely accepted in the United States, the problem of averting dropouts was recognized and many solutions posed and tried. Although the mortality rate steadily declined, our estimate in Chapter 3 (see Figure 4) was that 20 percent of today's high school age group would drop out before graduation.¹⁰ One of us pointed out the seriousness of the problem elsewhere in these words:

... we are accumulating rapidly in this country at the rate of a million young Americans a year, a residuum of disenchanted, frustrated, and, in many cases, alienated young adults. . . . A large ratio of these school

⁸ See the following of these reports for descriptions and evaluation of programs involving secondary schools: Homework Helper Program, New York City, OE-37025; Communication Skills Center Project, Detroit, Michigan, OE-37039; Junior High Summer Institutes, New York City, OE-37026; Project R-3, San Jose, California, OE-37040; College Bound Program, New York City, OC-37032.

⁹ Washington Research Project and NACCP Legal Defense and Educational Fund, Inc., *Title I of ESEA: Is It Helping Poor Children?* rev. 2d ed. (Washington, D.C.: The Project and The Fund, 1969), p. 2.

¹⁰ See "The School Dropout . . . What's Being Done for Him?" NEA Research Bulletin, 45:35 (May 1967) for earlier data.

drop-outs, at least for the early years after dropping out, do not establish themselves in our adult society, but became a part of a huge slag-heap of frustrated, alienated, rebellious, discontented young people.¹¹

Since the disadvantaged children are those most prone to drop out of school, the many programs designed to compensate for disadvantage may also be serving potential dropouts. Furthermore the evidence is clear that early frustrations and difficulties in school establish attitudes toward school that are not easily overcome in the high school years. Nevertheless many high schools have actively sought with some success to interest the potential dropout in staying in school, even to providing programs for their continued schooling after they have withdrawn. A review by the NEA Research Division of ideas and practices to reduce the dropout rate yielded these types of activities:

Identification of potential dropout

Special curriculum ("with the content of traditional 'academic' courses emphasizing application to specific situations in the 'outside' world")

Special courses ("in which the content is cooperatively planned by potential dropouts and teachers")

Work-study programs

Special adjustment classes (for pupils with emotional or behavior problems, and employing group therapy)

Acceleration of over-age pupils

Special attention outside class

Increased guidance services

Clubs ("especially created to meet the needs and pursue the interests of potential dropouts")¹²

A somewhat unique approach to the education of potential dropouts is found at the Douglas MacArthur Junior-Senior High School in the Dade County (Miami), Florida, system. This school typically admits boys who are dropping out of other schools, perhaps being forced out because of absenteeism or behavior problems, and provides them a program emphasizing varied shop electives but also offering the academic subjects required for a high school diploma as well as innovative activities in art and music. The functional focus of the program is illustrated by the following description of the "Communications" course:

At MacArthur the basic academics presented are those required by state regulations so a student can earn a standard high school diploma. English and history are combined in a basic course called Communications. In this course the instructors use non-graded materials for the

¹¹ Galen Saylor, "Issues in Secondary Education for the Future," in *Curriculum Imperative: Survival of Self in Society* (Lincoln, Neb.: Department of Secondary Education, University of Nebraska, 1968), pp. 48-49.

¹² "The School Dropout," p. 36.

typical failure-ridden student, whose reading ability ranges from non-reader to tenth grade level.

Each week a theme is selected and presented via a film, film strip, a school produced tape or a team lecture. Taped thematic materials are often stenciled and each student receives a working copy. Recent themes include: Conservation in Florida, The F.B.I. and Law Enforcement, The Working Man in the Large City, Communism and the War in Viet Nam and Jobs and Job Careers in Dade County. The emphasis is placed on the present rather than the past, yet questions arising lead students to search into the past to better understand the present and future. *Scope Magazine*, published by Scholastic, is used in conjunction with the theme for the week.

In this communications course, basic communicating skills are emphasized: listening, speaking, reading and writing. In this aural-oral environment these very adult students have found great success in learning to communicate. In addition each of the communications teachers stress the reading skills. Vocational Rehabilitation provides three reading teachers who work with those who need individual help.¹²

Still another approach is that of the "street academies,"¹³ storefront schools established in the 1960s in New York City for high school dropouts. These academies, 14 of them operating in late 1969 and eight of these in Harlem, enroll 15 to 30 students usually with three teachers and a street worker. Harlem Prep, perhaps the best known of these, graduated 70 students in 1969; and its graduates have been reported as continuing successfully in college. Supported by industries and philanthropy, the academy envisions additional schooling at more formal institutions and focuses on the total life of its students. Black described it as functioning "personally, tutorially, remedially," aiming at "putting together a dropout so he wants to get his high school diploma."

A comprehensive program for eliminating dropouts proposed by Sailor included these provisions:

1. *Jobs for youth*—". . . meaningful and significant work for the potential dropout or any student for whom the traditional program of the comprehensive school is not meaningful and significant," with school instruction hopefully related to the job.

2. *The American Youth Club*—". . . fine, new, pretentious, commodious and attractive buildings located right in the most needy sections of our urban cities. They would be clubs that would provide any proper and legitimate kind of activity for young people."

¹² Quoted from mimeographed materials dated January 22, 1970, provided the authors by Edward Blews, Principal, Douglas MacArthur Junior-Senior High School, Miami, Fla.

¹³ See for a description of these storefront schools, Jonathan Black, "Street Academies: One Step off the Sidewalk," *Saturday Review*, November 15, 1969, pp. 88-89, 100-101.

3. *Parent involvement and parent education*—“... a greatly expanded program of parent involvement in what we typically call parent education, but not the traditional type found in our smug, middle-class school systems today.”¹⁵

Talented and Gifted

In the late 1950s, categorical programs in the high school were especially bent toward the academically talented and gifted students. The nation's great concern for its scientific manpower and status in relation to Russia had precipitated an avalanche of federal funding and special programs aimed at attracting and training more youth in the fields of mathematics and science and the related professions. There was concern, too, for upgrading education for all and particularly for full stimulation of the nation's brainpower. Conferences, publications, and projects focused on the “academically talented” and “gifted.” Distinctions were made between these groups, with the talented generally including some 15 to 20 percent at the top of the national distribution on intelligence test scores and the gifted the upper 1 to 2 percent; but programs for the two groups tended to be identical.

As the mid-1960s brought even greater concern for the disadvantaged in our population, the focus of educational programs shifted accordingly. But most opportunities initially arranged for the seemingly more able students continue, and interestingly enough many of the same types of plans were used for the disadvantaged, too. The special opportunities as initially organized for the more able students are of these general types:

Programs of studies including a maximum number of courses in the academically favored fields of mathematics, science, and foreign languages as well as those required in English and social studies

Special sections of these courses for the more able students variously described as accelerated, speed, depth, or honors courses

Independent study plans encouraging depth or “quest” studies in fields of particular interest

Advanced placement courses or other plans to facilitate student preparation for advanced placement examinations that might affect students' college programs

Acceleration of the students' progress through high school

Categorical Programs: Pro and Con

Until and if the high school curriculum can be so organized as to make possible a program of learning opportunities specifically planned

¹⁵ Saylor, pp. 56-57.

and arranged for each student, some categorization of students is inevitable as a basis for planning programs relevant to individuals with similar needs. Even complete individualization would have to be based on planning of possible opportunities related to needs common to many individuals. Furthermore, the focus of special attention to different categories of individuals is a useful means of correcting imbalance in the school program. To avoid such swings to the talented and then to the disadvantaged, evaluation should be sufficiently continuous to detect somewhat earlier than in the past the unmet needs of any category of individual learners.

Categorical programs, on the other hand, can put individuals in grooves that overlap other grooves and in which some individuals fit poorly. Certainly there is great overlapping of the categories we have just identified. An individual student may be both black, disadvantaged, a potential dropout, and talented. He needs a program planned for himself, not one planned for either or all of these categories. Curriculum individualization is moving, and must move more completely, we believe, to the point that learning opportunities have been anticipated through studies of categorical needs, so that each individual's own opportunities are programmed for him in terms of his own needs, regardless of category. Thus he and his own curriculum would not be categorized, whatever the original source and classification of particular courses, activities, and services. The final section of the chapter reviews some plans for achieving such comprehensive curriculum individualization.

We turn now to various organizational arrangements which facilitate the individualization of curriculum opportunities.

Organizational Arrangements To Facilitate Curriculum Individualization

Several of the options for individual students discussed earlier in this chapter require particular organizational arrangements, as do categorical programs which set up special sections, schedules, and so forth for particular groups of individuals. Certain major types of these organizational arrangements developed to facilitate individualization are now described.

School-within-a-School Organization

Some larger high schools seek to maintain the social atmosphere of the small school, where people really know each other, by breaking the school into little schools. What is "little" varies from a four-teacher interdisciplinary team teaching unit (see Chapter 11) of some 100 pupils to a "little" school of as many as 1500 pupils in a complex like that of Evanston, Illinois, for some 6000 pupils. The basic concept regardless of size involves arrangements for a continuing staff, student group, and

facility that encourage continuity of teacher-student relationships and an identification of students with one another.¹⁶

For this plan to really effect the human relationships that are based on personal acquaintance and common purposes and interests, several arrangements for each little school seem critical:

1. A definite home for the little school—a wing or building in which the students have their home base and much of their instruction and activities
2. A continuing corps of leadership personnel—assistant principal or dean, counselor(s), and curriculum coordinator, for example—whose chief concerns are the programs and welfare of the students and faculty assigned to the little school
3. The little school to constitute a vertical slice of the total school, so that students and faculty continue from year to year with increasing opportunities for association with people known to each other
4. A program of activities, including athletic and other competition between little schools, that serve common interests and develop group rallying points
5. Many opportunities for individual students to participate in the planning, development, and evaluation of the program of the little school

Organization of Instructional Groups

Two types of arrangements of instructional groupings aim in part at the individualization of curriculum and instruction: grouping involving differentiation of curriculum plans for different groups in the same curriculum area, and variable-size groups for differentiation of instructional activities. The latter type of grouping—involving large and small group instruction and subgrouping within classes—is fully treated in a later chapter (10) on instructional procedure.

Grouping for curriculum differentiation has been done in several different ways in the high school. The elective system itself is an approach to differentiation, since many electives provide the students who take them opportunities to secure greater depth in the field. Even more so, the activities program, usually wholly elective, provides a plethora of opportunities for developing individual interests.

A particular use of the elective idea in conjunction with subject requirements falls just short of ability grouping. Several named courses may be offered in mathematics or science or even English which meet the requirement of a year's credit or unit in the subject field; the tenth-grade student for example, may elect or be counseled whether to take Basic Mathematics 10, or Geometry, or Advanced Algebra to meet the mathematics requirement. Since the election is based on his mathematics ability, this type of election is really a form of ability grouping.

Ability grouping within subjects has been the most popular approach

¹⁶ See Karl R. Plath, *Schools within Schools* (New York: Teachers College Press, Columbia University, 1965) for detailed description and illustrations of this concept.

to differentiating the curriculum for individuals of varying abilities. In this arrangement, students are divided into alternate sections of English 9, for example, on the basis of their reading level, or English achievement test scores, or intelligence quotients, or previous grades in English, or their previous teachers' recommendations, or on some combination of these factors. This organization assumes that the curriculum content of each section will be planned with reference to the abilities of the students included; it is well known, however, that all too frequently there is no differentiation in textbooks, course or study, or even teachers' plans for the different ability levels. Research studies attempting to determine the effects of such ability grouping have yielded little support for organizing alternate sections on the basis of student ability, although there seems much reason to use various groupings for particular instructional purposes.

A variant of ability grouping was popularized in the 1960s under such terms as "phasing." For example, five phases were available in most subjects in the Melbourne, Florida, high school program described by its principal at the time as "nongraded":

Phase 1: Subjects are designed for students who need special assistance in small classes.

Phase 2: Subjects are designed for students who need more emphasis on the basic skills.

Phase 3: Material is designed for students with average ability in the subject matter.

Phase 4: Subject matter is designed for capable students desiring education in depth.

Phase 5: Challenging courses are available to students with exceptional ability who are willing to assume responsibility for their own learning and go far beyond the normal high school level.¹⁷

Ability grouping or phasing by subject does permit better opportunity for individualizing curriculum plans than general ability grouping or teaching, since the subject grouping would tend to lower the range of differences in the class. Having five phases of a subject, with each clearly identified as having a different content, may overcome the tendency in the usual high-average-low grouping to use the same content for all. But these plans still assume that like individuals can be served by a common curriculum plan, and herein, we believe, lies the fallacy of grouping as a means of individualization. Only if the common plan includes many alternative learning opportunities for individuals can it really serve the purpose of individualization.

Independent Study

The provision of independent study arrangements seems a more promising approach to curriculum individualization than categorizing

¹⁷ Frank Brown, *The Nongraded High School* (Englewood Cliffs, NJ: Prentice-Hall, Inc., 1963) p. 50.

and grouping students, necessary as some group instruction may be. The concept of independent study is an old one, but its use for curriculum differentiation in the high school is relatively recent. Even in 1965-1966, Alexander and Hines found in a national survey of independent study in secondary schools that only about 1 percent of the schools could be identified as having independent study programs with these characteristics:

1. Differed from uniform homework assignments (including individualized study assignments in classes where each student must have such an assignment, as in the choice of required term papers or projects) to all members of a class
2. Involved studies carried on in school facilities or in outside facilities by arrangement of teachers
3. Were individually planned for each student concerned
4. Received school recognition in the form of course credit, full or partial, or other evaluation entered in official school records¹⁸

This survey of independent study plans classified them into the following patterns according to their intended function:

Independent study privileges or option. This is a pattern in which independent study is optional, although encouraged and facilitated by scheduled time for a large number of students, even the entire student population. That is, the student's schedule may be arranged so that he has a time and place and perhaps other help to do independent study.

Individually programmed independent study. In this pattern each member of some designated group is guided individually (but not tutored individually, as in tutorial instruction for achieving some norm) in planning and conducting a program of independent study related to his particular learning needs. This pattern sometimes uses programmed instructional materials and facilities.

Job-oriented independent study. This pattern employs independent study, as we have defined it, to prepare the student for a particular job, vocation, or career. This preparation may be geared for a semiskilled occupation to graduate-level research in an academic discipline.

Seminars based on independent study. In this pattern the seminar is more than a class by another name. It is a situation wherein students engaged in independent study can come together occasionally to share their reading, projects, or research findings.

"Quest-type" programs for development of special aptitudes. This pattern includes a variety of independent study activities for students who work almost completely on their own in the exploration, extension, and refinement of special talents, aptitudes, and interests not necessarily related to career choices.¹⁹

¹⁸ William M. Alexander, Vynce A. Hines, and Associates, *Independent Study in Secondary Schools* (New York: Holt, Rinehart and Winston, Inc., 1967), p. 11.

¹⁹ Alexander and Hines, pp. 12-13. Also see Glatthorn (footnote 4).

Our observation indicates a considerable expansion since this survey was made, of independent study arrangements in each pattern and especially the first. There has been considerable movement toward the large group-small group-independent study organization of instruction (frequently referred to as the "Trump Plan") recommended by the staff utilization studies and reports headed by J. Lloyd Trump and sponsored by the National Association of Secondary School Principals. New-type scheduling arrangements have facilitated the freeing of time for independent study, and schools using these now frequently schedule some modules each week for each student's independent study. Whether the time is really used for independent study, as the self-directed learning activity we prefer it to be, is of course another matter.

The independent study plan is a means of individualizing the curriculum for every student, although it has been used most frequently for the above-average one. It is a means of individualizing instruction, too, but our present reference is to its use in providing curriculum options for individual students; note some examples:

Taking a course by independent study that could not be scheduled in a class arrangement

Going further in a course than the class program provides

Doing background study for a course that other students had done in regular classes

Preparing for advanced placement or other examinations in subjects requiring preparation not done in classes

Creating products in any field which are individually planned and developed

Investigating in depth topics of particular interest, in lieu of or in addition to regular class work

Learning skills prerequisite to some course or occupation, on an individual basis

Serving as an assistant or apprentice in some out-of-school job to learn more about it

Using nearby libraries or museums or other resources to expand knowledge of a particular topic

Carrying on experiments or projects in a school laboratory (science, homemaking, industrial arts, and so on) for its intrinsic interest

Learning about a possible career by interviews and other information-getting arrangements

Extensive use of independent study plans does require considerable reorganization of the traditional high school schedule and class organization. Its requirements were succinctly stated as follows in a report of a comprehensive project for independent study development in a California school district:

some time for out-of-class study for students, and some planning time for teachers)

Talent Utilization (designing opportunities for teachers and students to meet and work in patterns other than the conventional classroom involving one teacher and thirty students)

Space Utilization (enabling facilities to house large groups, discussion groups, and resource areas for pursuit of independent learning)

Instructional Technology (using equipment and materials which provide students with reasonably frequent opportunities to get information from audio and visual sources which have previously been locked, generally speaking, between the covers of a comprehensive textbook. Since multimedia instructional devices and materials are literally exploding on the educational scene, this kind of support to an instructional system is becoming a reality.²⁹

We see independent study plans as having great potential for curriculum individualization in the high school. For these plans to succeed, we suggest the following guidelines:

1. Independent study opportunities should be introduced by teachers who see their value and wish to guide them.
2. Students should be given time and other opportunities for independent study as they request it; opportunities can be withdrawn as students show themselves lacking in independent study skills and attitudes.
3. Ability or grade levels should not be set as selection devices for students to do independent study; motivation is a far more important criterion.
4. Teaebers rate the school library as the most important and best used facility (see Table 22); but other school facilities are also useful in independent study. In general, wide use of independent study opportunities requires the opening of school learning facilities (and out-of-school facilities, too) to individual students.
5. Some flexibility in scheduling (see the next section) must be provided if independent study plans are offered; various alternatives in addition to scheduled modules for independent study are available—for example, released time for some students, alternating class and independent study arrangements, and individually scheduled appointments of students with teachers.
6. Marking systems and independent study plans inevitably come into conflict; a pass-fail, or complete-incomplete pattern of marks is more consistent with the philosophy of independent study.
7. The establishment of a program of independent study, and indeed its whole operation, seems to us to be an area of curriculum development in which student participation in planning is especially appropriate, even essential.

Flexible Scheduling

Full use of independent study plans, as well as variable-size groupings and other approaches to the individualization of curriculum and instruc-

²⁹ Ragene Farris, "Independent Study for Less Academic Students in a Comprehensive High School," *Journal of Secondary Education*, 42:344 (December 1967).

Table 22. Ratings of How Well Selected Facilities Are Used for Independent Study Made by 300 Staff Members in Thirty-six Secondary Schools

Rank	Facility	Mean Rating
1.	School library	3.52
2.	Tapes and recorders	2.47
3.	Records and phonographs	2.43
4.	Individual study or work spaces	2.32
5.5	Science laboratories	2.29
5.5	Study rooms	2.29
7.	Classroom library	2.10
8.	Departmental resource center	2.01
9.	Microfilm and projectors	2.00
10.	Reading improvement devices	1.90
11.	Language laboratories	1.52
12.	Teaching machines	1.09

Source: William M. Alexander, Vynce A. Hines, and associates, *Independent Study in Secondary Schools* (New York: Holt, Rinehart and Winston, Inc., 1967), p. 89.

tion, demand a different system of scheduling the time of students and teachers than the traditional uniform period day of the high school, with its assumptions that all classes and all students in each class would meet the same number of minutes each day throughout the year (or in some cases, the semester). This Carnegie unit-derived schedule is being replaced by many arrangements designed to introduce some flexibility into scheduling.

One type of modification retains the usual length period (typically 50 to 60 minutes) but departs from the notion of single daily periods for each course. Double periods may be used for some courses, meeting from two to five days per week. Rotating periods provide for activities and other special purposes. Multiple classes may be scheduled in the same period in the same classroom, with the teacher adjusting the schedule from day to day. A block of time of two or three periods may be used for interdisciplinary team teaching with the teaching team deciding on uses of the time. Even within the single period teachers may introduce flexibility by arranging for exchange of classes, for some students to work independently rather than to attend class, and for one or more periods each week to be used for student conferences, independent study, and other purposes.

Modular scheduling utilizes a much shorter period or module, usually 15 to 30 minutes. Decisions are made as to the number of modules needed in a week for particular activities—large group, small group, laboratory, independent study. Ideally the number of modules required varies not only according to the subject field but according to the individual pupil;

This report points to what we consider as major contributions and problems of flexible scheduling. This time arrangement does make possible much better opportunities for students to work on their own; and, not included in the above excerpts, it also increases opportunity for teacher planning and teacher-student conferences as well as varied instructional grouping. Unfortunately, many schools do lack facilities or fail to open all facilities for independent study. Some students do abuse the unstructured time provisions.

Schools without Walls

We explain in Chapter 12 how high schools of the future will make wider use of flexible scheduling to give increased opportunity for students to use their time responsibly in more facilities in the school and even out of school. We see schooling increasingly occurring in locales outside the school itself.

A new concept of schooling, perhaps the ultimate application of the independent study concept, was implemented in Philadelphia in 1969 in the Parkway School. Other cities, including Detroit and Chicago, were planning in 1970 to also establish schools without walls. At Parkway there is no conventional arrangement of classrooms but students are organized in tutorials (15 students, teacher, and university intern) for basic skills and guided for most of their instruction to activities in libraries, museums, theaters, hospitals, newspapers, business and industries, and other such resources strung along a two-mile stretch of the Benjamin Franklin Parkway in the heart of the city. About 400 students were enrolled in this school in 1969-1970 with plans for expansion to 2400 by 1972. The range of learning opportunities in the city is indicated by the following "Partial List of Cooperating Agencies" published by the school in 1970;²⁴ each student participates in a program in at least one of these institutions:

- Academy of Natural Sciences
- Addressograph-Multigraph Corporation
- American Civil Liberties Union
- American Friends Service Committee
- Archdiocese of Philadelphia
- Art Alliance
- Atlantic Richfield
- Catholic Youth Organization

Center City Magazine
City Hall
Commission on Human Relations
Convention and Tourist Bureau
Council for Professional Craftsmen
County Court
County Medical Association
Day Nursery for the Deaf
Delaware Valley Regional Planning Commission
Drama Guild
Fellowship Commission
Fidelity Mutual Life Insurance Company
Film Media Center
Franklin Institute
General Electric
Gratz College
Greater Philadelphia Chamber of Commerce
Greater Philadelphia Movement
Hahnemann Medical College and Hospital
Health and Welfare Council of Greater Philadelphia Metropolitan Area
Industrial Valley Bank Building
Insurance Company of North America
IBM
JCRC
Metropolitan Associates of Philadelphia
Moore College of Art
Municipal Services Building
NAACP
NYU Educational Network
Parochial Schools Administration Building
Peale House
Pearl Buck Foundation
Penn Center
Pennsylvania Academy of Fine Arts
First Pennsylvania Bank
Pennsylvania Railroad: Suburban Station
People for Human Rights
Philadelphia 1976 Bicentennial Corporation
Philadelphia Board of Education
Philadelphia College of Art
Philadelphia Free Library
Philadelphia Museum of Art
Philadelphia Music Academy
Philadelphia National Bank
Philadelphia Zoo
Pocket Playhouse
Police Administration Building
Pomerantz Office Supplies

Print Club
Regional Film Library
Rodin Museum
Smith, Kline and French
Society Hill Playhouse
Temple University
J. Reid Thomson, Architect
United Gas Improvement
University of Massachusetts School of Education
University of Pennsylvania
Urban Coalition
Urban League
John Wanamaker, Philadelphia
Weinstein Geriatrics Center
YMCA of Philadelphia
YWCA of Philadelphia
YMHA of Philadelphia
YWHA of Philadelphia
Philadelphia Community College
Comet Camera Repair Company
Taurus Leather Company
Joy Camp Company
Center City Hospital
John F. Kennedy Vocational Center
Neupauer Conservatory of Music
Society To Protect Children
Center for the Whole Person
Resistance Print Shop
B. Bernstein and Sons
World Affairs Council
American Red Cross
Philadelphia Wireless Technical Institute
McCarrie School of Dentistry
First Baptist Church
First Presbyterian Church
Swedenborgian Church
Unitarian Church
Philadelphia Magnet School of Languages
WIP Radio
Philadelphia Credit Bureau
Spectrum Film Processing
Drexel Institute of Technology
United Health Services
Horizon House
Committee of Seventy
Philadelphia Gas Works
General Tire Company
Evening and Sunday Bulletin

KYW

Philadelphia Daily News

Philadelphia Inquirer

Philadelphia Tribune

WCAU

WFIL

WIBG

WPEN

WUHY

WIBF

WKBS

Nongraded and Continuous Progress Plans

The nongraded concept has been reflected most frequently in elementary school organization, especially at the primary level, although some high schools have been described in the literature as nongraded. The concept is essentially a reaction to the restrictions on individual progress set by the traditional pattern of graded schools, graded content of the subject and the textbooks, and grade standards for use in marking systems and for determining promotion from one grade to another. As we have already noted, the high school's elective system has long been one approach away from gradedness since high school pupils can have some choices under this system as to what courses they take and when they may take them. However, the facts of somewhat standard content in both required and elective courses and of marking systems with possible failure in courses are characteristic of the graded structure, which is further reflected in high school organization by the general expectation that all students in a particular course will spend the same amount of time per day and per year in completing this course. Thus the departures from these characteristic features we have already noted—especially independent study and flexible schedule—are movements away from the graded school.

"Continuous progress" is to us a more accurate term than "nongraded" for the goal of the various practices which seek the continuous, unbroken movement of learners from school entrance to school exit and throughout each year in school. Students can be classified by grades and still have continuous progress. Furthermore, schools can be called non-graded but still lack continuous progress; a review by Hass of research on nongraded schools concluded, in part: "Frequently grade labels have been removed, but graded materials and content, tests, and reporting remain."²⁵

Although the elective system and the growing use of independent study and flexible scheduling offer much to facilitate the high school student's continuous progress, there remain the contrary options noted above regarding a standard content for a year-long (or, occasionally, semester-long) course. Several approaches toward curriculum individualization which are breaking down the standard content-time course notions, follow.

Programmed Content, Variable Time

One approach, most clearly illustrated by programmed instructional materials, employs a specific definition of content items, a prescribed sequence of these items, and encourages each student to work through the items at his own rate. This approach has long been used in such materials as correspondence courses, and in schools with laboratory manuals in science, typewriting manuals, workbooks in many subjects, and even in the use of textbook exercises. However, these materials have frequently been used on a class basis with little or no opportunity for students to progress at varying rates. More recently, the use of more sophisticated programmed instructional materials has helped the student evaluate his own responses and progress, and more frequently to work through them at his own rate.

This approach was termed "mini-sequencing" by Rollins, who commented that "... carried to a reasonable extension, this kind of curriculum organization might lead, eventually, to a totally auto-instructionalized curriculum, with pupils who enter the school being guided through program after program on computers, teaching machines, and programmed texts, emerging twelve or fourteen years later with a diploma."²⁶ The present authors see mini-sequencing as a useful technique for individualizing instruction in several curriculum areas, and shall discuss this use further in Chapter 10. But we agree with Rollins' rejection of mini-sequencing as the approach to total curriculum development: "At this moment in the development of our educational programs, we are not ready for a computerized, mechanized, plugged-in-pupil kind of curriculum, even if we want it." We add, we definitely do *not* want it except for particular instructional purposes in those selected courses where it can serve these purposes better than any other approach.

When courses are so programmed, the curriculum plan must also include provisions for each learner's movement from the course when completed. Under the standard content-time notion, he would simply have time on his hands; under the continuous progress one, he would move on

²⁶ Sidney P. Rollins, *Developing Nongraded Schools* (Itasca, Ill.: F. S. Peacock Publishers, Inc., 1968), p. 32.

to depth studies, probably of an independent study nature, in the same area, or to some other course, typically also mini-sequenced with variable time arrangements. Or the mini-sequencing may be within sequential units, to which we now turn attention, and he keeps moving from one unit to another in the same course.

Sequential Units, Variable Time

Another approach to continuous progress organizes content items into stages, steps, or units. This approach, in the form of units of content or work, has long been employed in curriculum development but typically in the development and use of units undertaken and completed by the entire class on a uniform schedule. The newer units, variously called "learning activity packages," "learning packets," "unipacs," and so forth, generally assume individualized progress although as Rollins points out there is still the danger "that this kind of curriculum organization, on the surface at least, so closely resembles the kind of curriculum organization that presently exists in our conventional schools that teachers will be tempted to keep the class members together so that all of the individuals in a class move at exactly the same pace."²⁷

The general procedure of curriculum development in this approach involves (1) grouping content items, arranged sequentially, into units, (2) determining the sequence of units, and, possibly, (3) adding in connection with some or all units optional activities for individualization purposes. This third step is characteristic of the traditional unit approach, typically involving various individual and small-group projects, but not necessarily so in the sequential unit plan which may, as we noted, simply represent an organization of completely programmed material in which the only option is rate of completion. The plan for inclusion of differentiated activities is illustrated in the "Learning Activity Package" (LAP) of the Nova High School, Fort Lauderdale, Florida:

Each Learning Activity Package contains a common core of knowledge and skills through which all students are expected to progress. The typical elementary or secondary school teacher invests close to one hundred per cent of student-time in core activities to be performed by all students. Students progressing through Learning Activity Packages invest perhaps one half of their time in common core activities. During the remaining time the students pursue areas which are related to the subject being studied but are of high interest to each particular student. These activities may differ for each student. Interest activities may be of a highly abstract level, for certain students learn most efficiently and comfortably working with highly theoretical materials. Other students learn

²⁷ Rollins, pp. 33-34.

best while involved in activities of a practical or even manipulative nature. Student interest is an important motivational factor. Therefore, a variety of activities are programmed for a wide range of student interest.²⁸

The operation of time options in the continuous progress plan using sequential units in some courses is further illustrated by this description of the Theodore, Alabama, High School program:

When one continuous progress course is completed a student receives credit for the course and then immediately begins the following course in the same subject, begins a course in another subject, or when it will be beneficial to him, spends additional time in other courses which he is already taking. Since the student will spend a minimum of half of his time in each course in independent study, he may adjust his daily schedule to provide adequate time to carry out a laboratory experiment in science, to prepare and cook a meal in home economics, to do lengthy research in the library, or simply to devote more time to a course which is difficult for him.²⁹

Development of the sequential unit curriculum plan may also assume that some learners will complete more units than others in a year course; thus each student spends the year in the course but may complete only a portion of the possible units. Indeed the plan meets well most criteria for individualization, assuming that the actual instruction and progression through the units are individualized; the only assumption of the plan the authors question is the one that all content can be so precisely sequenced for all learners. This question may be met by a somewhat different approach now to be considered.

Variable Sequences and Time

Rollins described a somewhat different use of units as the "mega-sequence," in which "the pupil is not expected to move from Content Unit 1 to 2 and on."³⁰ In this plan, there is not only the time option of the other approaches, and the options as to number of units and the optional activities therein of the sequential unit plan, but there are also options as to the sequence in which individual students take individual units.

This approach under terms such as the "project method" has long been used in some types of prevocational education and to a limited ex-

²⁸ From Arthur B. Wolfe and James E. Smith, "Learning Activity Packages," in *The LAP at Nova* (Nova High School, Fort Lauderdale, Fla., Summer 1968). Mimeo-graphed.

²⁹ John W. Jackson, "The Individualized School," *Journal of Secondary Education*, 41:95 (May 1966).

³⁰ Rollins, p. 35.

tent in committee and independent study plans in other fields, especially English and social studies. Its full development would involve selection of courses lacking a highly ordered structure or sequence, and for these the development of alternate units with teaching plans that assume different starting points and sequences for individual students; obviously the plan would employ much independent study and other individualized instructional arrangements. Considerable criss-crossing among units would replace a sequential order of units. Although several students might choose to work on the same unit together, in most instances each would soon have to work on his own to get at relevant content in other units; Rollins noted that "mega-sequencing militates against any attempts at grouping pupils, unless pupils are regrouped daily."³¹

Comprehensive Planning for Individual Students

In this chapter we have described, too briefly perhaps, many approaches toward individualization of curriculum opportunities. Some of these have long been available in some high schools, others are relatively new and not yet widely available. In view of the slowness with which innovations spread in education and of the considerable range of quality among high schools, we would expect it to be many years before most high schools have incorporated the best of the approaches we have described. Some steps whereby improvement processes can perhaps be accelerated are detailed in our last chapter; in concluding this one, we wish to state some guidelines for developing more comprehensive curriculum plans that focus on individual students. The guidelines we see as most important relate to student involvement, organizational facilitation, and curriculum development.

Student Involvement in His Own Curriculum Planning

The necessity for a greater degree of student involvement in planning, operating, and evaluating the high school became very clear with the student unrest of the late 1960s. We have noted in this chapter and elsewhere some of the possibilities of greater student involvement in the total high school program.

Now we call attention to the necessity of each student's active and direct involvement in his own, individual curriculum plan. Only as he deliberately seeks and avails himself of learning opportunities does the school's curriculum plan really affect him. Hence comprehensive planning for individual students must not only provide many learning opportunities considered appropriate for some students but it must guide students in

³¹ Rollins, p. 36.

making wise and adequate choices of these opportunities. Project PLAN represents a long-term, comprehensive effort toward this goal: "Project PLAN, a Program for Learning According to Needs, represents a comprehensive system of education designed to make full use of available knowledge and resources to provide the full development of the potentials of all young people."³² On the principle that "an effective system of individualized education must be based on a program of individual planning and personal development," Project PLAN is developing five functions as follows:

1. *Learning about educational and occupational opportunities, citizenship roles, and the nature of other activities involving self-expression, appreciation, and personal realization and satisfactions.* In Project PLAN a student is provided information of this nature beginning in the first grade and continuing throughout twelve grades of the elementary and secondary educational program. . . .

2. *Formulating personal values and evaluating personal potentials.* One of the most important functions of an individual is to learn about himself. . . . In the upper grades, such information would be directly related to college and adult activities and roles. A student would be supplied with probability data indicating his chances for attaining any particular role.

3. *Learning to make wise decisions.* . . . Although we expect that substantial individual differences in ability to make wise decisions will persist even after an improved educational program is provided, this ability is so important that training in such skills should be emphasized at all educational levels.

4. *Planning personal development.* The information and skills included in the three previous points provide a basis for establishing appropriate goals, both immediate and long-range and for planning an educational program that will assist a student to achieve them. It is proposed that a student learn not only how to establish appropriate goals and develop specific plans for achieving them but also how to plan and how to learn.

5. *Learning to manage a personal development program.* . . . Project PLAN encourages students to take responsibility for their own educational and personal development, beginning in the first grade. By applying the principles of contingency management and by using systematic planning procedures, any educational program can be transformed into one which provides opportunities for a student to carry out his own plans and achieve his own goals. Such a program would replace current educational procedures in which a student is required to conform to administrative lock-step and the whims of specific teachers.³³

High schools that would plan comprehensively for curriculum individualization must assist their students in the foregoing ways, we believe, and this project is expected to yield useful materials for these

³² John C. Flanagan, "Project Plan," *Clearinghouse*, 43:63 (September 1968).

³³ Flanagan, pp. 63-64.

purposes. Announcement of the program by its developer, the Westinghouse Learning Corporation, in early 1970, indicated that the program would include language arts, reading, social studies, mathematics, and science; that it would cost an extra \$100 per pupil per year; and that ". . . in a nutshell, PLAN assigns appropriate learning tasks to pupils; suggests ways to accomplish these tasks; tests the student before he can move on; develops the student's ability to manage a program he has partially planned for himself."³⁴

Organizational Facilitation

We have already suggested a number of organizational principles and practices for facilitating curriculum individualization. In summarizing these and adding others, we utilize herewith a review of the literature, research and practice on organization for instruction which produced the following guidelines that as excerpted seem especially relevant to curriculum individualization in the high school:

1. *Small school units*—"the school-within-a-school pattern can be followed to maintain some of the clear advantages of the small unit."
2. *A home base and adviser for each student*—"normally, 20 to 25 advisees per teacher with an hour per day scheduled for home base activities, including individual pupil advisement, would seem a reasonable arrangement."
3. *Many learning opportunities*—"whatever organization plan is followed should open, not close learning opportunities. . . . The prescription of unit credits for high school courses and uniform expectations as to the number of courses a student may take definitely restrict learning opportunities."
4. *Vertical classification systems*—"the guideline stated here is caution against any classification system—graded, ungraded, track, rail, or special group—that fixes an individual in some groove in which he must remain from year to year."
5. *Horizontal classification systems*—"avoid rigid classification and grouping patterns" for "once these patterns are set, it is very, very difficult to deal with individual learners as such or to free special groups for special purposes."
6. *Special groupings for special purposes*—"some purposes can best be served by relatively large and relatively small groups and by arrangements which facilitate some individual and even tutorial learning activity."
7. *Organizing for self-directed learning*—"students should have much opportunity to organize group activities of their own, to participate in decisions affecting them, and to plan and evaluate such learning activities as they can profitably direct on their own."
8. *Scheduling for multiple purposes*—"simplicity of scheduling can come only as schedule-making (beyond setting of daily beginning and ending

³⁴ "Individualization Breakthrough Announced," *Education USA*, February 2, 1970, p. 121.

times and arrangements for scheduling resource centers and spaces used by many groups and individuals) is turned over to smaller units of the school."

9. *Access to resources*—"organizational policies and procedures [should] be set which encourage the use of all resource centers and laboratories and other instructional facilities as fully as possible . . . furthermore, access to these spaces should be as immediate as possible so that learners who have urgent reasons to use them do not have to wait . . . until the class or school day ends."

10. *Time and facilities for cooperative planning and teaching*—"better organization for instruction comes only as professional teachers well-acquainted with their pupils can plan, evaluate, and replan somewhat continuously grouping and schedule arrangements which fit their purposes, their pupils, and themselves. As this responsibility becomes theirs and they have time to do it such teachers may well be able to effect more imaginative and effective organizational innovations than any now in use."³⁵

Illustrative of many of these guidelines is the program of the Abington, Pennsylvania, High School, North Campus (grades 9-10), described in the following summary:

Each student has his own individual schedule, a modular schedule with flexible time increments, developed and scheduled entirely by hand.

Each student participates in at least three small group seminars each week, where his opportunities for interaction are magnified because the group is small enough for frequent interchange.

Each student may work on his own or with the help of teachers and teacher aides in one or more of thirty specialized learning resource centers, equipped with the newest media and materials for individualizing learning.

Each student is enrolled in major courses using structure-based curricula which stress discovery, induction, and sequential learning. Major curriculum projects underway include SMSG mathematics, BSCS biology, ESCP earth-space science, EBF foreign language, Anthropology Curriculum Study Project in Social Studies, and world literature in English.

Each student has total access to all specialized learning facilities in a new flexible plant. There are two large-group rooms, twenty seminar rooms, a little theatre, an audio-lingual learning center with dial-access information retrieval system, a large library with dial-access study carrels, and many specialized teaching and learning centers.

Each student counts in this innovative school, one of the demonstration schools selected by the Institute for Development of Educational Activities (I/D/E/A). Abington High School North Campus is a school that prides itself on being a school where the individual is important.³⁶

³⁵ See William M. Alexander, *Organization for Instruction* (Gainesville, Fla.: Florida Educational Research and Development Council, 1969) for the full statement of these guidelines, and also for the review of theory, research, and practices from which they were derived.

³⁶ From mimeographed material entitled "Prospectus—Abington High School North Campus—A Center for Individualized Learning," provided the authors in 1969 by the school's principal, Allan A. Glatthorn.

Curriculum Improvement

The involvement of students in their own curriculum planning and organization which facilitates individualization are basic but merely preliminary to the improvement of the school's total curriculum plan. Aspects of this plan especially relevant to individualization of curriculum opportunities have been treated in this chapter; in Chapter 12 we deal more comprehensively with the curriculum of the high school of tomorrow.

Additional Suggestions for Further Study

1. Alexander, William M., ed., *The High School of the Future: A Memorial to Kimball Wiles*. Columbus, Ohio: Charles E. Merrill Books, Inc., 1969. Three of the challenging essays in this volume are grouped under the Part title, "The Individual and His School": Arthur W. Combs, "A Curriculum for Learners"; Robert S. Fleming, "Needed: Greater Student Involvement"; and Earl C. Kelley, "Humanizing the High School of The Future."
2. Blackmer, Alan R., *An Inquiry into Student Unrest in Independent Secondary Schools*. Boston: National Association of Independent Schools, 1970. Describes effects of student unrest on the independent schools, said to make them "stronger and more alive than ever before."
3. Hamilton, Norman K., and J. Galen Saylor, eds., *Humanizing the Secondary School*. Washington, D.C.: Association for Supervision and Curriculum Development, 1969. These papers explore various possibilities as to ways and means of adapting the high school so as to make the school more successful in fostering humanness.
4. Hart, Richard L., and J. Galen Saylor, eds., *Student Unrest: Threat or Promise?* Washington, D.C.: Association for Supervision and Curriculum Development, 1970. Offers suggestions as to curriculum and administrative changes to meet student appeals for improvement.
5. Hillson, Maurie, and Joseph Bongo, *Continuous Progress Nongraded Education: Inventions, Innovations, and Implementations*. Chicago: Science Research Associates, Inc., 1970. Describes practices and recommends steps in moving a school system toward continuous progress education.
6. Hillson, Maurie, and Ronald T. Hyman, *Change and Innovation in Elementary and Secondary Organization*, 2d ed. New York: Holt, Rinehart, and Winston, Inc., 1971. Includes excellent selections of readings on continuous progress, team teaching, grouping, flexible scheduling, and other approaches to curriculum individualization treated in this chapter.
7. Holt, John, *The Underachieving School*. New York: Pitman Publishing Corporation, 1969. This collection of short pieces by Holt that had appeared separately elsewhere highlights his condemnations of the traditional schooling system and his emphasis on self-directed learning: "Education is something a person gets for himself, not that which someone else gives or does to him."
8. James, Howard, *Children in Trouble: A National Scandal*. New York: David McKay Company, Inc., 1970. Blames schools for failing to meet the needs of many students, and cites schools where dropout and delinquency prevention programs have helped.
9. Postlethwait, Samuel N., H. T. Murray, Jr., and Joseph Novak, *The Audio-Tutorial Approach to Learning*, 2d ed. Minneapolis: Burgess Publishing Co., 1969. Describes and evaluates audio-tutorial teaching methods, with emphasis upon student learning.
10. Scobey, Mary Margaret, Chairman, and Grace Graham, Co-chairman, eds., *To Nurture Humanness: Commitment for the '70's*. Washington, D.C.: Association for supervision and Curriculum Development, 1970. Several papers define "What It Means To Become Human": another set

describes the revolutions which affect the nurture of humanness; another identifies inhibiting and facilitating forces; and the final papers lay out the educational imperatives in nurturing humanness.

11. "Student Participation: Toward Maturity?" *Educational Leadership*, 27: 437-536 (entire issue, February 1970). Contains several useful analyses and reports of theory and practice relating to the involvement of students in planning and evaluating their schooling.
12. "The Computer in Education," *Bulletin of the National Association of Secondary School Principals*, 54:1-124 (entire issue, February 1970). This series of articles on the role of the computer in education includes several illustrations of how the computer can assist in focusing curriculum and instruction on the needs of individual students.
13. Unruh, Glenys G., and William M. Alexander, *Innovations in Secondary Education*. New York: Holt, Rinehart and Winston, Inc., 1970. This description of innovative practices and trends in the high school includes several chapters especially related to curriculum individualization: Two, "Focus on: The Student"; Four, "Focus on: The Organization"; and Six, "Focus on: Materials and Media."

PART III

TEACHING
IN THE
HIGH SCHOOL

CHAPTER 9

Teacher Planning at the Instructional Level

The classroom teacher plays an important role in curriculum planning at several levels. At one level, along with his fellow citizens, he takes part in making societal decisions about the basic nature and general thrust of education for all American citizens. At another level, he works with other educational personnel making system-wide decisions concerning the overall curriculum organization, the use of district planned guides, the adoption of national curriculum projects, and articulation problems between parts of the system. At still another level, he plans with his colleagues in his own school building and his subject department. Finally, at the classroom level, the teacher makes plans for and with a particular group of boys and girls for a particular point in time. Chapter 5 considered the total professional responsibilities for planning the program of the high school. In this chapter, we concern ourselves with the teacher's planning at the *classroom instructional level*.

Important Considerations for Instructional Level Planning

It would be a mistake to suppose that there is one best method for teacher planning. The teacher's personal style and the group dynamics of a given class will shape the planning process. While the planning needs of individual teachers will vary, there are certain important general considerations which may serve as guidelines for a philosophy of planning without setting up a rigid method. Our own points of view about planning can be summarized as follows.

Some system of planning is essential for professional level teaching.

Frequently, we hear high school teachers making plans for "extemporaneous" or "ad-lib" planning. They maintain that they do not need written plans or guides because they develop learning activities from the perceived needs and interests of the students and they further claim that this element of "flexibility" allows them to "seize the teachable moment." Such claims should be recognized for what they are—excuses for sloppy, aimless, ineffectual, and often frustrating classroom experiences. There is no substitute for careful, systematic planning. Students are quick to realize when the teacher is unprepared to give direction to the learning experiences in the classroom. High school students also sense when there is purpose and direction.

We emphasize the importance of good planning not only for purposes of maintaining good classroom order and moving along toward clear goals but for other reasons as well. The professional is one who learns from experience. What plans worked? What activities and plans did not work? What needed materials were not available? What changes will improve instruction in the future?

Additionally, good planning helps keep the professional teacher current in his field. As he reads to find materials for his own class activities with his students, he learns about new developments and new insights in the scholarly disciplines which will then be reflected in the subjects he teaches. In one sense, the teacher who reads widely to keep up with his field is doing a very important kind of advanced planning for his own classes.

Still other uses of written plans can be identified. When the regular teacher must be absent from his classroom, if he leaves good, clear, understandable plans, the work of the classroom can go on. If there is a substitute, these written plans can serve as a valuable guide.

More effective supervision and in-service teacher growth can be expected when there is a record both of what has been planned for the classroom and after-the-fact records of what did happen. While good planning is time-consuming, it is also time-saving. Teachers who plan for the many classroom matters which may arise are then able to handle them in a routine manner without taking up valuable time arguing about the best procedures. In short, instructional planning includes skills which can be improved with practice.

Classroom instructional planning must be related to an overall curriculum plan for the school and school district. The classroom teacher should be familiar with the overall curriculum plan for his subject area and the plans for articulation between his subject and others. The teacher's role in this level of curriculum planning has been discussed in Chapter 5. The classroom teacher should be familiar with any state department guides and resources, cooperatively developed resource units and curriculum guides, and the like. The classroom teacher uses these as a framework from which to develop plans for his own classes.

Planning should be related to instructional purposes. While this statement may seem so obvious as to be a truism, it is not always easy to follow in practice. The classroom teacher's planning is often related to textbook organization, or the planning may consist of a series of activities which have no clear reference to any consistent statement of purposes. The teacher should be sure in his own mind that everything that he plans for can be traced to a goal or objective. An examination of resource units and unit plans occasionally reveals long lists of objectives which seem to have been developed by one planning group and long lists of classroom learning activities which would seem to have been developed by quite another group of planners.

Instructional purposes are sometimes termed *aims*, *goals*, *purposes*, *functions*, *objectives*, *outcomes*, or other such terminology. In general practice, these terms are used synonymously. In the classroom, this can cause some confusion; however, not much can be gained by arguing shadings of meaning. It may be useful, however, to note that such words as *aims*, *goals*, and *functions* are general terms and are useful when talking of long-range goals. Such terms as *purposes* and *objectives* can be used for more specific, immediate, and measurable instructional terms. Chapter 4 includes a discussion of the definition of terms and the use of goals in planning and teaching.

Long-range planning is needed to assure continuity in the program of the learner. Long-range planning must of necessity be general and flexible enough to allow for modification from experience, but there must be an overview of the plan for the year. In an earlier treatment of this matter, two of the present authors had this to say:

Certainly the teacher is unlikely to begin a year's or a unit's planning by reading several volumes on educational goals and on learning, but we believe that he can profitably think through such pertinent questions as these:

What goals of this school should be sought in this year's work (or this unit of work) for the group I teach? What can I assume as to what has already been accomplished toward these goals for this group? What other teachers, if any, of the same pupils will be working toward the same goals, and how? How can I find out from time to time what progress we are making?

What principles of learning are applicable to this year's work (or this unit of work) for the group I teach? What can I reasonably assume about this group of pupils as to their motivation for their experiences? their self-concepts? their readiness? their learning skills? What types of learning experiences are most likely to secure maximum pupil involvement? What needs for differentiated learning activities are indicated by the known characteristics of these individuals?"¹

¹ Galen Saylor and William M. Alexander, *Curriculum Planning for Modern Schools* (New York: Holt, Rinehart and Winston, Inc., 1966), p. 445.

Long-range plans should be considered suggestive rather than binding. The long-range plan which takes the form of a carefully detailed scope and sequence chart for the year, listing specific objectives, topics to be covered, skills, content, and levels of mastery, can be a very restricting force. Unfortunately, many subject-area curriculum guides, planned on a district-wide level, are developed in just this manner. Also, teachers who follow a textbook from cover to cover impose the same kind of rigid straitjacket on instruction in the classroom. A long-range plan is merely a framework from which the teacher gets ideas and directions for his shorter term planning. Some teachers find it helpful to consider their long-range planning as "strategy"—a campaign plan to reach long-range target goals. Their short-term planning then would be considered "tactical" planning—the *tactics* being those classroom learning activities to carry out with the student during the campaign. The strategy is flexible and changeable as a result from what is found out from the tactical decisions. While this analogy with military planning should not be carried too far, it can help teachers avoid making the mistake of trying to implement their long-range plans in the classroom on a daily basis without taking intermediate steps.

Anecdotes about the teacher's rigid adherence to the preconceived plan are sometimes offered as an argument against this kind of planning. It was reported several years ago that when President John F. Kennedy was assassinated, some teachers were known to have said they could not stop to talk about the assassination because they had to finish the planned unit on history or political science on schedule in order to give the test. Such stories, if true, say more about the personality of a given teacher than about the usefulness of long-range planning.

Long-range planning includes asking the kinds of questions noted above. It also includes such activities as blocking out the school year, assigning tentative time allotments to major categories or goals, organizing centers or broad themes. Some tentative decisions must be made about the kinds of learning activities to be provided, the nature and types of materials available, the kinds of resource units which may be developed in concert with other teachers, audiovisual and other materials to be ordered for future use. Long-range planning is considered in more detail later in this chapter.

Planning must provide for a wide range of individual differences. Learning to make plans which include differentiated goals, alternative ways of working towards these goals, differentiated rates of progress during the plan, and differentiated levels of depth with different evaluation procedures offer a continuing challenge to teachers. It is our position that teachers can learn through careful planning to promote great diversity within common curriculum areas. For such diversity to flourish, careful planning for different kinds of materials, different activities, and

different learning styles in an atmosphere of mutual respect must become an important component of the teacher's professional in-service growth and development.

Planning should provide for student involvement in the planning process. Teacher-pupil planning is accepted as a worthwhile goal by most teachers, but it proves such a difficult goal to achieve in practice that it is often neglected. Some of the activities which have been promoted under the name teacher-pupil planning in the past have in reality been manipulative activities with the teacher making all of the important decisions and then working in such a way as to get students to think they were involved in the planning by choosing between two or more activities. Today's high school student is much more ready for a share of significant planning for his own learning than were his predecessors. Indeed, if students in your high school have not already begun to demand a strong voice in their curriculum, it should be expected in the near future.

There are many sound reasons for working to make teacher-pupil planning a reality. First, there is greater involvement of self in those plans in which one has a voice.

The psychologist Goodwin Watson, summarizing insights from psychology most likely to be helpful in the classroom, stated that, "Children are more apt to throw themselves wholeheartedly into a project if they themselves have participated in the selection and planning of the project."² A second reason for teacher-pupil planning, one that is assuming increasing importance in the modern high school, is that the *act of planning* and the ability to plan are important curriculum goals. Skill in the planning process can be developed as teachers and pupils accept cooperative planning as a worthwhile classroom goal. Teacher-pupil planning enables a greater variety of class activities to be utilized than would be possible by instructor or teacher planning alone. When students are allowed to assume responsibility in directing their own learning, they are encouraged to bring creativity and originality to the planning situation, rather than passive receptivity.

The general goals or aims of a course are usually determined at the district level or school building level. The professional teacher then makes some basic decisions about the broad purposes and some specific objectives for his class. In teacher-pupil planning, the teacher has the responsibility for clarifying the goals that are expected by this system. Within the broad framework of the curriculum and the predetermined general goals, there are many areas where students can make significant decisions about

² Goodwin Watson, "What Psychology Can We Feel Sure About?" in *Readings in Curriculum*, 2d ed., Glen Hass, Kimball Wiles, and Joseph Bondi, eds. (Boston: Allyn and Bacon, Inc., 1970), p. 288.

specific objectives. Both teachers and pupils have legitimate "inputs" in teacher-pupil planning. Ineffectual teacher-pupil planning results when the teacher abrogates his responsibility for knowing the demands of the general curriculum in the specific course, and when teacher-pupil planning is falsely assumed to mean building classroom learning activities on pupils' present interests and felt needs. Guidelines for successful teacher-pupil planning are discussed later in this chapter.

Planning procedures should be evaluated regularly. Just as the outcomes of instruction should be evaluated to see if instructional goals are being achieved, so should the planning system of a teacher be checked and rechecked to see if it is serving the functions demanded of it. Since we are not recommending any single system of planning, but rather suggesting approaches to planning, it is to be expected that evaluations will vary as much as planning systems. In general, the following kinds of questions can help a teacher get a fix on whether or not his planning system is doing the job he expects it to:

Is my planning system comprehensive?

Is it relevant to all important goals?

Is it flexible; does it allow for on-the-scene modification?

Are there provisions for multiple-level activities?

Is it efficient, that is, not too time-consuming for the benefits derived?

Is it effective, that is, do I follow it, am I happy with it, could someone else follow it?

Am I getting results from the instructional program?

It should be recognized that a long-range plan is not a teaching plan. A good long-range plan is, in one sense, a plan for planning. Most secondary teachers are taught to use resource units. In fact, it is customary for prospective teachers to be required to develop resource units in their special methods classes during their teacher education programs. Student teachers and beginning teachers are sometimes seen taking a resource unit into the classroom and following it point by point. A resource unit used in this manner will, first of all, never be completed and, second, will engage students in many activities unrelated to the readiness of individuals in the group.

Finally, instructional planning is an individual matter. Beginning teachers are advised to follow some formal systematic method of planning. We suggest that all teachers learn to develop and use resource units from which unit plans and daily plans can be derived. As teachers gain experience, they should experiment with different ways of translating resource units into teaching learning activities and devise systems that are comfortable for them. Some formal plan summary may be necessary for

administrative purposes; but the professional teacher develops the kind of written plan that allows him to capitalize on his own interests and strengths, is not a burdensome chore, and proves effective in a classroom situation.

Some Observable Trends in Planning

The decade of the 1960s saw the significant changes in secondary curriculum areas we described in Chapter 7. The nature and direction of the several national curriculum projects combined with developments in learning and teaching theory have resulted in observable changes in the literature concerning curriculum planning and development.

Some concomitant changes in the ways secondary school teachers think about planning can be identified. First, it has already been noted that many of the national curriculum projects developed materials with very detailed plans for the teachers to follow. In fact, one of the criticisms of the curriculum projects is that the plans were created to be "teacher proof." These plans have many times proved very useful to teachers as they studied ways to improve their understanding of their chosen field. It is difficult, however, to conceive of plans developed without the active involvement of the teacher which would take into account all the contingencies of a given classroom. It becomes necessary for teachers to learn to go beyond the commercially prepared teaching plans which accompany some of the new curriculum materials.

A promising trend in instructional planning is the greater proportion of time devoted to planning activities in the classroom teacher's schedule. In some instances, this increased planning time is a result of fewer contact class hours with students. This is especially true in some of the innovative programs involving team teaching, flexible scheduling, independent study plans, and other similar practices. In some instances, however, the increased planning time is a result of the teacher's incorporating planning activities into the instructional program. That is, planning is seen as a legitimate curriculum goal and learning activity. The content of the lesson, the skills development activity, and the evaluative measures are all related to planning processes.

The third change in the nature of planning at the secondary school would be the increased involvement of other personnel in planning with the teacher for classroom level instruction. Cooperative planning with departmental and school colleagues for departmental and school-wide activities has long been a common activity of teachers. Increasingly, however, the classroom teacher plans cooperatively with other teachers, resource persons, and paraprofessionals the instructional strategies and tactics for a common group of students. This kind of planning is discussed in more detail in the subsequent chapter on team teaching. Another signifi-

tant change is in the character of statements of goals and objectives in written plans. Statements of goals still include such traditional terms as understandings, skills, attitudes, appreciations, knowledges, and other desired outcomes. There is an increasing body of literature and a growing practice of using taxonomies of objectives for different domains of learning. Another development in this direction is the growth of the behavioral objectives movement. A discussion of the use of newer taxonomies and behaviorally stated objectives, along with examples, may be found in Chapter 4. Ways in which teachers can develop statements of behavioral objectives for classroom use are also discussed later in this chapter.

What Kinds of Planning Does a Teacher Do?

At the classroom instructional level, the teacher's planning responsibilities may be viewed as two separate kinds of tasks: long-range and short-term planning, including planning for each class meeting. The procedures appropriate for each separate task vary in some important ways. An examination of the nature of the planning process at each level may help the reader identify more fully the teacher's role in the classroom.

Long-range Planning

Long-range planning encompasses at least three major areas: (1) setting instructional purposes; (2) blocking out the framework for the year and subdivisions of the year; (3) identifying, selecting, and developing resource units or other modes of organizing many learning opportunities from which more short-term and daily plans can be derived. In subsequent sections, we shall take a look at ways in which each step in planning can be managed.

Setting instructional purposes. Certainly, the teacher must begin with some general ideas about the nature and meaning of the course or class which he is teaching. At one level, this may be reflected by a *course description* of a very brief nature. Course descriptions are frequently available in curriculum guides or printed student handbooks or may be developed by the teacher by merely reflecting on what he thinks the title of the course, the grade level, and the readiness of the students and the expectations of the school demand. Teachers and students sometimes laughingly refer to the lack of similarity between printed course descriptions and what actually goes on in the classroom. This is probably as it should be. In the first round of planning, some general overview statement of what the course is all about serves merely as a springboard to get started. It may well be that during the subsequent planning periods, and surely during the instructional periods, deviations from any course description

will occur. The use of prepared or official course descriptions has decreased at the secondary level in favor of other approaches. More typically, long-range planning begins with lists of aims and objectives for the course or class. We feel it is a useful exercise, however, for a teacher, possibly working with colleagues, to put down on paper a narrative course description of the major aims, general content areas, suggested general procedures, and other pertinent information. Such an exercise may be useful in giving teachers a good general overview of course possibilities in a way that starting with lists of more or less specific objectives may not. The following simulated course description for a sophomore English course illustrates how a very general description can set a tone, be generative, suggest directions, and leave ample room for individual modification:

English 10: The major aim of English 10 is to provide the student with opportunities to explore the nature of language as communication, to experience literature as ordered reflection on the human experience, and to use a variety of print and nonprint media in the creative process of composition. *Language study activities* will follow the "linguistic discovery" method of observing, cataloging, and generalizing from the living language of the student's total environment, including the school, the community, television, radio, news magazines, and literary sources. Students will generalize their own "rules of language" and check them against several authoritative sources. Literature study will revolve around the framework of themes which are meaningful to older adolescents in contemporary society. Multiple titles will be used in pursuit of a common theme. The initial thematic category is *Heroism*, with subcategories and subsequent themes to be chosen cooperatively with the class. The emphasis in composition study is the *rhetoric of exploration* followed by the *rhetoric of exposition*.³

The above course description which was developed during a summer curriculum workshop to guide further classroom planning in an innovative high school was changed considerably before it reached the classroom level of instruction. The following chart shows one of the steps in expanding a general course description statement into a more detailed long-range planning chart. Having decided during the course description writing phase to use a thematic categories approach in literature and a functional approach in language, a chart for a tenth-year English framework was developed (see page 309).⁴

Another approach to setting instructional purposes is illustrated by a list of tenth-grade goals taken from the language arts courses of study, grades 10-12, Miami Jackson High School English department.

³ From one of the authors' own teaching files.

⁴ Nova High School, Fort Lauderdale, Fla., *English Curriculum Guide, 1963-1964*.

Units 34-44 (10th year) The World of Form	Unit 34— Nonfiction: The World of Reality. Emphases: spe- cial verb usage in action nar- rative, syllabic stress as clue to meaning, formal and in- formal speech.	Unit 35— Nonfiction: The World of Expres- sion. Emphases: writing the es- say, news story, editorial, per- suasive writing.	Unit 36— The Short Story— Our Master Teacher. Empha- ses, beginning and ending para- graph patterns, connotation and denotation.
Unit 37— The Short Story— II. Emphases: the meaning of theme, concept of appropri- ateness in langu- age, writing to achieve a "single effect."	Unit 38— The World of Vicarious Ex- perience—The Novel Emphases: writing the com- parison paper, concept of rele- vance and economy.	Unit 39— The Novel—III. Emphases: use of imagery in impressionistic writing, devel- oping a para- graph around a concrete image used as a symbol of a complex idea.	Unit 40— The Novel—III. Emphases: style as word choice, use of emphasis to enforce meaning.
Unit 41— Drama I. Emphases: im- aginative writing, use of conflict as organizing principle, devel- oping the para- graph by amas- sing descrip- tive details.	Unit 42— Drama II. Emphases: structure of the play, writing "business" and directions, uses of hyperbole in writing.	Unit 43— Poetry I. Emphases: the metaphor and extended meta- phor, uses of simile and per- sonification, rhythmic patterns.	Unit 44— Poetry II. Emphases: uses of allusion, conveying meaning through tone, using word sounds for emphasis.

TENTH-GRADE OBJECTIVES

To introduce and develop an appreciation of poetry, its special language, sound effects, symbolism, and rhythm

To further students' knowledge of non-fiction, with emphasis on biography

To deepen the students' appreciation of the message any fine novel must convey through a study, in depth, of *The Pearl*

To further individual literary enrichment through the reading and discussion of many novels and biographies in the Scholastic unit "Survival"

To refine the students' understanding of communication by an analysis

of structural elements in sentence formation, with emphasis upon the complex sentence and the principles of subordination in appositives, verbals, and dependent clauses

To foster a greater appreciation of the communicative arts through critical analyses of movies and teleplays

To engender personal confidence in verbal ability in a variety of speech situations and to stimulate meaningful research through purposefully planned and researched individual speeches

To enlarge students' practical application of the English language through growth of the individual's vocabulary, spelling skill, and ability to use the dictionary as a tool for further self-improvement

To continue the study of the paragraph as an effective instrument of expression through delineated analysis of unity, coherence, and emphasis

To improve performance in the areas of spelling, vocabulary, and usage
To develop proficiency in outlining⁵

At this initial step of long-range planning, most teachers will be eclectic in the ways they state their instructional purposes or goals. Some goals may be stated in terms of skills, understandings, attitudes, desired outcomes, or other terms. Some of the statements may be in very general terms and others may be at a very specific level. Some of the language at this level may describe intangibles which can hardly be described, much less measured, that is, goals such as appreciations, deeper insights into, feelings for, responses to, take delight in. At this level, there is no problem in mixed metaphors and varying levels of abstract to concrete goals. It is probably best if the teacher just puts down everything and anything that comes to mind. During subsequent steps of planning, the statements will be refined, some will be eliminated, and others added. The attempt here is to be comprehensive and include all possible major goals and ways of thinking about purposes of instruction.

We should emphasize here that we are not recommending that teachers spend long periods of time thinking about various ways to state their purposes. Teachers rarely have the luxury of leisure time to devote to the task of stating objectives; they must, in fact, spend most of their time in the classroom working to achieve objectives. As the teacher does his own planning, he has available to him curriculum guides, resource guides, textbook materials, his own file of teaching materials, and the ideas of his students. The point here is that the effective teacher does know what he is about generally and can convey to others what he is prepared to do specifically.

Blocking out the framework. This planning activity involves setting

⁵ Miami Jackson High School, Miami, Fla., English Department Guide, mimeographed, no date.

up tentative time goals for accomplishing the major learnings or instructional purposes. Within the framework of the school's curriculum plan, the classroom teacher develops a framework for his own class for the school year. A simple way to begin this planning activity is to divide the school year into several major time periods, possibly coinciding with the school's evaluation marking and reporting periods. These time allotments are tentative and changeable, but they do constitute a kind of curriculum map with various mileposts. Some organizing center or major theme or controlling purpose will be entered. The example on page 313 from Ft. Lauderdale, Florida's Nova High School English curriculum guide for tenth grade showed the block-out for the year in some detail. The framework shown for the eleventh and twelfth year programs is less detailed and more flexible:⁶

11TH YEAR

Units 45-55 (11th year)	Units 45-46 Individuality— World of Ideas	Unit 47— Man's Relationship with Himself. Emphases: writing the personal essay and essay of opinion, use of quotation as a literary technique, literal and figurative meaning.
Unit 48— Twentieth Century Man. Emphases: mass media, research paper techniques, linking with transitional elements.	Unit 49— The Need for Human Relation- ship. Emphases: analytical reading skills, controlling idea, arrangement in effective order.	Unit 50— Social Cohesion. Emphases: principle of subordination, concentration on the middle portion of the composition.
Unit 52— Individuality Versus Conformity.	Unit 53— The Uncommon Man. Emphases: uses	Unit 51— The Concept of the Mass. Emphases: mass media, theme construction using order of time and space, expressing main ideas expanded form.
Unit 54— Utopias.	Unit 55— The American Dream.	
Emphases:	Emphases:	

⁶ Nova High School English Curriculum Guide.

Emphases: uses of fact and opinion, use of structural linkage.	of personification, conno- tations, developing central idea by use of examples.	skills, point of view in writing. figurative language.	parallelism, critical writing, sensory impressions, tone in writing.
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12TH YEAR

Units 56-66 (12th Year) The World of Ideas	Unit 56 THE	Unit 57 RECOGNITION	Unit 58 OF SUFFERING
Unit 59 IN	Unit 60 HUMAN	Unit 61 AFFAIRS	Unit 62 MAN'S
Unit 63 SEARCH	Unit 64 FOR	Unit 65 THE	Unit 66 NONMATERIAL

A next logical step in the long-range planning process is to flesh out some of the framework areas by selecting resource units, textbook sections, or other teaching-learning materials including student activities, independent study plans, bibliographies, field trip possibilities, and other learning opportunities. During this step, the teacher is focusing upon the particular students in his classroom, but he is thinking of their general possibilities rather than the specific activities to be pursued by the individual. The aim then, during this phase of planning, is to collect as many possible learning opportunities related to the general theme or organizing center as are available, including many more than may actually be used in the classroom. This phase of planning is usually termed *unit planning*.

We find it useful in working with both beginning and experienced teachers to distinguish between two basic kinds of unit planning. Two of the present authors treated this matter in another work:

The term "unit" has many uses in education, and there is confusion even regarding such extensions as *resource unit*. To systemize the discussion here we start with the *unit of work* as the actual organization of learning experiences related to the unit topic, theme, problem, or other source of unity. That is, the unit of work is what actually happens and is finally

developed in the learning situation itself. A resource unit is a compilation of suggested learning experiences and resources typically developed for more than one group of pupils and having possibilities for use by several teachers. Thus, the resource unit is a "resource" from which teachers may draw materials to be used in plans for their own classes. A unit plan is a particular teacher's outline of the unit of work he hopes to develop with a particular group of pupils. It may or may not be based on a resource unit the teacher has helped to develop. Logically, then, a group of teachers interested in teaching similar areas of content prepare a resource unit together; each teacher selects from the resource unit ideas in developing his own unit plan; and, finally, as many units of work are developed in the classrooms as there are teachers and groups of pupils.⁷

Most teachers are familiar with the typical resource unit studied in the undergraduate special methods classes and found in most curriculum libraries. Used properly, the resource unit is probably the best overall planning aid available to classroom teachers. Not only does the resource unit include numerous stated objectives of varying levels of specificity, suggested group and independent study activities, lists of audiovisual and other materials, and suggestions for evaluation, but the unit is generative also of many other possible activities. The preparation of resource units is a valuable curriculum development activity, especially when done in cooperation with other teachers in the school and in the school district. Resource units may take many forms, and they may vary from subject-centered to experience-centered to theme-centered, according to the orientation of the planning group.

Some resource units are based on a very elaborate superstructure and sometimes become as lengthy as a classroom text. Basically, a complete resource unit includes: (1) a statement of objectives or overview or desired outcomes or special emphases—whatever language may be used, (2) an outline of content area and a number of suggested classroom activities or learning experiences for group or individual participation, (3) lists of materials—typically books, films, filmstrips, and recordings, and (4) suggested evaluation procedures.

Some subject areas lend themselves to this typical resource unit format more readily than others. English language arts and social studies teachers probably have more of these kinds of resource units available than do teachers in mathematics and science. Teachers in the science areas, however, have other kinds of prospecti or unit guides appropriate for their particular field.⁸

⁷ Saylor and Alexander, p. 448.

⁸ For an especially good resource unit approach to mathematics, see Dallas Independent School District, *Mathematics for Secondary Schools, Curriculum Guide*, 1968, p. 268.

The Present Status of Unit Planning

When the Morrisonian Unit method of teaching emerged some five decades ago, the teacher's planning was done in terms of the classic steps of *exploration, presentation and stimulation, organization, and recitation*. Other teaching methods have dictated the teacher's planning method. For example, the recent curriculum reform movement represented by curriculum projects in several disciplines includes some very specific guidelines for planning. Teachers using some of the text materials in modern foreign language instruction, in particular, are urged to follow the prepared planning guide very closely. Advocates of the performance objectives or behavioral objectives approach suggest that the general and sometimes the intangible desired outcomes statements are too nondirective to be of any use. From the literature, it would appear that few curriculum groups are getting together to construct cooperative resource units. Our own point of view, however, is that while these contemporary developments in planning related to contemporary developments in teaching do represent progress toward a more scientific and professional teaching-learning process, each of the new movements has very real limitations.

The present period is undoubtedly one of neglect of the resource unit planning approach. Emerging movements toward a more humane education are beginning to reflect a dissatisfaction, however, with the exclusive discipline-centeredness of the recent curriculum reform movement. Attempts to integrate, synthesize, and generalize beyond the limits of the classical disciplines predict a slight resurgence in the use of the resource unit approach. In the 1970 Yearbook of the Association for Supervision and Curriculum Development, entitled *To Nurture Humane-ness: Commitment for the '70's*, Arthur W. Foshay presents a dramatic result of overemphasis on the discipline approach:

It had been 20 years since I had seen her teach. I remembered her as one of the finest teachers of young children I had ever seen. I knew people whose lives she had touched with her own amused, confident style. So, with a younger friend, I arranged to visit her class once more—to drink again from that cup.

The same old gracefulness was there, and the same down to earth way of dealing with children. But the teaching! The teaching! She held the whole class together for 30 minutes while she presented them with one riddle after another, and provoked competitive, hand-waving puppet-responses, as if she were a rank amateur. Finally, the class got out of order, and she dismissed them for a rest. What in the world had happened? Where was the old resourcefulness and sensitivity? The old professional style?

The answer was right there before us: she had, in good faith, agreed to try some new math curriculum materials. The math was new to her, of course, but she had no trouble learning it. But the new curric-

propriate, based on what he knows about the present level of his students. Use of the resource unit method also requires that a teacher be skillful in teacher-pupil planning and in the guiding of a variety of classroom instructional activities such as large- and small-group and individual study. The use of a resource unit does not replace the classroom use of good text material. The textbook is perhaps the single most valuable basic resource tool. Often, today's textbook has been written by teams of qualified scholars and experienced teachers. The textbook frequently includes illustrations, examples, and suggested skills development activities in addition to the essential concepts and facts. The resource unit helps bridge the gap between the textbook and the student's own learning activities. The resource unit will bring into the classroom sources to expand on textbook material. Also, a good resource unit will include problem-solving activities which will challenge students to use many sources, including the textbook.

A broad theme unit approach fosters the development of integration of learnings from different subject matters. Students do not study isolated topics unrelated to major ideas or key concepts or underlying themes. This is the real meaning of the term unit, that is, those things which are unitary clustered around an organizing center.

Some of the problems in using resource units are: (1) They are time-consuming to produce. A good resource unit requires that a teacher, or preferably several teachers, research many sources to gather materials and develop activities related to a significant topic or theme. This handicap can be overcome if the school develops a system of updating resource units through keeping files of activities and new materials. (2) Another, potentially more serious, disadvantage of the resource unit may occur when teachers do not have a clear understanding of the difference between a resource unit and a unit plan for the class.

Short-term Planning

We turn now to the teacher's task of making specific plans for units of work in the classroom. Once major instructional purposes and divisions have been tentatively set, the teacher must develop specific steps with definite target dates. Resource units are frequently developed cooperatively by several teachers and designed to be useful in a variety of kinds of class situations. The unit of work, or *teaching unit*, is the specific plan the teacher develops to be used in his own classroom at a particular time. The teaching unit may cover several days or even weeks. This means that while the teaching plan or unit of work is specific and definite, adaptations for each day's classroom activities will need to be made. This calls for another level of planning or *daily lesson plans*.

The typical teaching plan used by an experienced teacher is most

often very brief. It will usually include, however, at least a brief statement of the specific objectives aimed for and suggested class activities to be used. Many teachers include a list of questions which may be posed to guide discussion or stimulate research activities. The social studies unit plan presented below is written out in more detail than most teachers will use, but it illustrates the functions this level of planning should serve:

Unit: Population Pressures

Method: Class discussion

Problem: What steps should the United States take to improve diplomatic relationships with Communist China?

Goals: After this lesson the student should have furthered his understanding of the influence of population pressures upon our diplomatic relations with Communist China, as evidenced by:

1. His contributions and questions posed during the discussion
2. His ability to draw conclusions during a follow-through discussion of the problem

Lesson Approach:

Yesterday we saw a movie which summarized the foreign relations of Communist China up to 1949. What were some of the major reasons for the tension that existed?

What is hate? How is it propagated? What purposes does it serve? What fundamental bases of hate were implied?

What techniques are being employed in Communist China today which suggest a similar campaign is being waged against the United States?

Why do "hungry nations" sometimes fall prey to Communism? What are our best defenses against their propaganda?

What historical conditions have implanted the seeds of distrust among the Chinese?

What bases for distrust exist in Southeast Asian nations? (Vietnam, for example)

Lesson Development:

I. Analysis of the Problem

1. What other things happening in Communist China and America suggest to you that we need better relations?
2. What are some of the causes which lend to the present tension?
3. Why is it crucial that we establish better relations?
4. What might be some effects if we do not establish better relations?
5. Do you feel that China's aggressive attitude is likely to persist? Why or why not?
6. How does the problem relate to population pressures? Do other Asiatic nations have similar problems? If so, how are they solving them?
7. What have the Chinese done in the past to alleviate food shortages? How effective have these techniques been?

8. What conditions are similar (and different) in the world today?
11. Establishing the Hypotheses

Now in view of our discussion, **WHAT STEPS SHOULD THE UNITED STATES TAKE TO IMPROVE DIPLOMATIC RELATIONSHIPS WITH COMMUNIST CHINA?**

Possible solutions (suggestive only)

1. Recognize China in the United Nations
2. De-escalate the North Vietnam conflict
3. Withdraw our opposition to Red China's bid to join the United Nations
4. Get out of Southeast Asia
5. Embark upon a regional assistance and development program

What might be some advantages and disadvantages of these solutions?

Summary: We have discussed one of the hottest problems facing the United States today. We know that the solutions we have developed can not be realized by the direct action of this class. But we do know that indirectly, through intelligent conversation with our parents, who are voters, that we can help choose those governmental officials who feel much the same as we do. We are also preparing ourselves to be intelligent citizens and policy makers of the future.

Let us restate some major ideas or concepts which seem to have emerged as a consequence of this discussion (suggestive only).

1. The present conflict is indirectly related to inadequate food supplies and overpopulation pressures.
2. Decisions relative to one aspect of the problem will influence many other areas.
3. Asiatic mistrust of foreigners has a historical basis.¹⁰

The above illustration is a plan for a *class discussion*. If a teacher tried to follow each step in the plan and ask each question, the class discussion would degenerate into just a question and answer lesson. It is obvious that the plan with so many questions expects the questions to serve as guidelines only. They would be asked to stimulate and to direct discussion in a purposive manner. Note that the questions proceeded from a review of the previous day, toward more open-ended questions, toward questions which ask for a problem-solving approach. Depending upon the progress of the class, this teaching unit plan would be extended over several days. In this event, the teacher would have to plan the strategy for each day's class meeting. Since this plan is so detailed, many teachers would do this by merely noting where they left off at one day and planning some introductory activity to get back into the plan. This procedure is probably quite

¹⁰ Kenneth H. Hoover and Helene M. Hoover, "Lesson Planning: Key to Effective Teaching," *The Clearing House*, 42:42-43 (Sept., 1967).

satisfactory for some kinds of activities. Other times, more definite, formal daily lesson plans may be useful.

Planning Each Class Meeting

Effective teaching includes advance preparation for each meeting of each class, as well as guidance of pupils' own planning. Some schools require the preparation of lesson plans; others leave this to the teacher's own decision. We believe that it is essential for the teacher to have a plan for each class meeting and that, in general, it is best for this to be noted in writing. Some type of folder or notebook, or planbook for each class is helpful.

If the teacher uses a teaching unit plan similar to the one illustrated above, making the plan for each class meeting may require only a few minutes thought and work. If the plan is to be developed from a less detailed teaching-learning unit or from a resource unit, adequate planning will require more time.

The actual format of the plan for each class meeting is unimportant. Different types of activities will call for different types of plans. Whatever the form used, however, a good lesson plan will make provision for at least these following important sections:

A clear statement of objectives. It is better to have a limited number of specific objectives for any one day's class. A plan with too many objectives results in a lack of focus, and the period will end with an insecure feeling on the part of the teacher and students that not enough progress was made. Two or three main objectives should be attempted in a single period. This does not mean that there will not be different objectives for individual students, but that each student will pursue no more than one or two or three objectives.

A brief outline of the general procedures. A few notations about how the group will be organized--whole-class discussion, small groups for project work, or beginning in one organization and changing to another. Note any special physical arrangements to be made. Plan for any special materials such as books, films, or other resources.

A brief plan for evaluation or feedback procedures. A teacher should make a note of the ways he plans to get feedback to see if the students are moving toward the objectives. This may include a sample question or two that might be asked. Perhaps the teacher will ask students to summarize progress made in small groups, or plan a checkup phase during the class to allow students to ask questions.

A more detailed form for daily lesson planning is advocated by

Besvinick. He maintains that an effective daily lesson plan will meet the following criteria: (1) the teacher should be able to teach from it; (2) someone else who is qualified in that subject area should be able to teach from it; (3) it should be useful as a basis for planning the lesson if it is taught again sometime in the future.¹¹

Also in planning for each class meeting, there is the important task of deciding on and arranging for the use of appropriate learning resources and materials. From an increasingly plentiful and varied supply of available resources, the teacher must choose those with the most potential for motivating, aiding, and intensifying the learning processes for each class period. Teachers who rely almost exclusively on the basic supplies in the usual classroom (the textbook, the teacher, and the students) are neglecting the motivational and reinforcing values of an enriched learning environment.

On the other hand, teachers who inundate the classroom with every available printed, technological, or human resource run the risks of satiety, confusion, and boredom. The learning environment in the classroom can suffer "resource overload" if intelligent criteria are not applied in selecting learning resources. This risk is especially great in the case of the newer media and technological resources. When classes tune in to the school's closed circuit television instructional program without relating the material to the specific objectives of the class period, the learning opportunities are not directed but merely accidental. Use of programmed instructional materials, visiting speakers, field trips, recordings, films, and the like may become barriers to learning rather than being learning aids if they are scheduled merely as time fillers without relation to the subject at hand.

In attempting to decide whether to use a particular resource in the class, the teacher can often be guided by the answers to a few searching questions such as the following:

Is this resource directly related to a class objective?

Could it be used productively by one or more class members in an individual project?

Is use of this resource feasible in terms of effort to install it, run it, return it?

Is the probable benefit worth the cost?

What are the alternatives to using this resource?

Every high school has a multitude of potential learning resources. During early and intermediate stages of planning, lists of available resources should be made and procedures for acquiring needed ones should

¹¹ Sidney L. Besvinick, "An Effective Daily Lesson Plan," in *Strategies and Tactics in Secondary School Teaching: A Book of Readings*, Leonard H. Clark, ed. (New York: Crowell-Collier and Macmillan, Inc., 1968), pp. 166-168.

be developed. The high school library, the departmental offices, the counseling offices, and the school administrative offices should be consulted for help in locating and securing needed resources. In addition to the usual resources of the school library, the audiovisual center, and the human resources file, exciting new learning resources possibilities are becoming increasingly available. We offer the following list of resources as suggestive of newer possibilities for classroom use:

Large-group instruction center—Check procedures for scheduling and using.

Small-group conference rooms—Check procedures for scheduling and type of furniture arrangement needed.

Computer-assisted instruction—If the school has this capacity, find out how to keep up with student progress.

Team teachers—Chapter 11 has suggestions for capitalizing on this resource.

Student self-study materials—Are materials such as the Learning Activity Package (LAP) described in Chapter 8, and other programmed instructional materials available through the school system?

The list could be extended indefinitely. The important skill of planning the use of resources for each class meeting requires that each teacher develop his own list from such guidelines as above.

Up to this point, we have identified the teacher's planning responsibilities as those *long-range activities* of setting instructional purposes, blocking out the instructional framework, selecting and developing unit plans, and certain *short-range activities* of planning the specific units of work and developing plans for each class period. Figure 16 portrays the general flow from long-range to short-term planning. It is clear that classroom teachers who carry out their planning responsibilities conscientiously will work many hours beyond the 8:30 to 3:30 school day. We have mentioned the trend towards using the planning process as a classroom goal. This will result in better planning as well as better instruction. In our view, there is no substitute for careful, systematic planning, and the time thus spent will be well repaid in more effective classroom procedures and better scholarship on the part of the teacher.

The Role of Pupils in Planning

Earlier in this chapter, we identified student involvement as an important ingredient in the planning process. We believe that pupils are much more likely to be committed to learning enterprises which they themselves have determined as being important. Furthermore, we believe that the ultimate goal of all education is a self-directed learner who assumes increasing responsibility for his own learning. Thus, we feel that

I. LONG-RANGE PLANNING

1. Setting Instructional Purposes
 - Listing possible aims and objectives
 - Referring to system-wide plans
 - Writing tentative course descriptions - outline or narrative



2. Blocking Out a Framework

- Setting tentative time goals for major learnings
- Choosing organizing centers, controlling purposes, and/or major themes
- Writing overview outline of possible units



3. Developing Class Unit Plans

- Selecting resource units for general suggestions
- Listing possible group activities
- Identifying suggestive individual study activities
- Locating materials to be used
- Developing evaluation plans

II. SHORT-TERM PLANNING

1. Developing Specific Units of Work

- Writing specific objectives
- Choosing appropriate class activities
- Locating needed resources



2. Planning Each Class Meeting

- Writing specific intentions for the session
- Outlining general organizational procedures for the period
- Planning evaluation or feedback procedures

Figure 16. Flow of teacher planning at the instructional level.

every teacher should study ways of involving students in significant decision-making at the planning level.

The nature and amount of student involvement in planning classroom goals and learning activities will vary in terms of overall curriculum goals and the readiness of students to assume responsibility. Two of the present authors have treated this matter in an earlier volume, suggesting that teachers consider such criteria for effective pupil-teacher planning as the following:

1. Pupil-teacher planning should identify appropriate purposes of learning experiences.
2. The teacher should guide cooperative planning activities so that fundamental curriculum goals are served.
3. Pupils' judgment as to learning experiences should be based on an adequate understanding of alternatives.

4. Pupil-teacher planning should be used only as teacher and pupils are willing to be guided by plans made in this way.
5. Plans should be modified as new needs arise.
6. The setting for pupil-teacher planning should encourage meaningful discussion and effective decision-making.¹²

Remember that we are discussing the involvement of students in advanced planning for the work of the classroom. At what point is it realistic to turn over to students some of the planning responsibilities? Everyone in education is familiar with the jokes about the "progressive" teacher going to class and asking, "All right, students, what do you want to study today?" One memorable cartoon depicted a class of unhappy youngsters confronting a teacher with a response, "Please, teacher, do we really have to study what we want to study today?" Unthinking acceptance of the principle of involving students in the planning has undoubtedly resulted in just such unintelligent action. Effective teacher-pupil planning requires that both teacher and pupil play appropriate roles in the planning process. In general, the professional teacher has the responsibility for determining the major concepts, themes, and necessary skills relative to the discipline, or demanded by society, that must be developed if legitimate curriculum goals are to be served. Within this framework, students should have a voice in identifying problem areas, formulating questions to be studied, and suggesting types of learning activities they would like to pursue.

For example, a social studies class in Contemporary Problems may have as a major curriculum goal that students should deal with the generalization that "there is a functional interrelationship between man and his environment." A curriculum planning group, including the classroom teacher, may have decided in advance that society's stake in an intelligent management of ecological issues is so great, that all students should investigate the ways in which this interrelationship works. If this is the case, it is the teacher's responsibility to introduce the planning for this unit by making clear that the classroom activities for a given period will relate to this major topic or theme. In pursuit of this curriculum goal, however, student planning for the kinds of investigations or studies that would clarify or illustrate this generalization could include projects ranging from the study of the effect the American frontier had on the behavior of settlers and developers and the general American character to a study of local pollution control needs and/or efforts including field trips and interviews, filmed reports, and any other activities which students will think of as they begin to plan their own study activities. The teacher's role during the phase of planning might appropriately include making tentative suggestions of possibilities which students are free to accept or reject. The

¹² Saylor and Alexander, pp. 456-457.

teacher also has a responsibility of continually asking the question, "Will the proposed activity test the general proposition of the unit?" If the students feel that it will, and give reasons, the activity should be included even if the teacher has to disagree. Subsequent study will either prove or disprove the validity of the activity. The valuable learning here is the students' study rather than the end product. The teacher has the responsibility also for helping students plan ways to evaluate both the procedure and the product of their studies.

Not all instructional goals lend themselves equally well to teacher-pupil planning, nor is it necessary to think that everything must be determined jointly. In skills areas, there is a minimum of opportunity and need for joint teacher-pupil planning. There are enough opportunities for legitimate areas of teacher-pupil planning that it is unnecessary to attempt to use this procedure when more direct methods may be appropriate. Another caution in teacher-pupil planning is that students must learn the skills of self-directed study. If the usual classroom pattern has been teacher-led instruction, turning over to the class a large block of time for self direction will result in tension, confusion, and anxiety. It may be necessary to use the topic of teacher-pupil planning as a unit of study to help develop these very necessary skills. Another frequent criticism of teacher-pupil planning is that it requires a great deal of time. This criticism is valid only if "covering the topic" is the primary goal of instruction in the class. If problem-solving skills, development of concepts and interrelationships, and learning how to learn are important goals, teacher-pupil planning will be seen as a productive activity rather than a time consuming one.

Planning for Evaluation

Finally, the purpose of all educational planning is pupil growth toward the sought-after educational goals. Evaluation is the process of determining progress, or lack of progress, toward these goals.

Educational evaluation is a very complicated process. First, it is patently impossible to state all desirable goals in the precise terms which would permit quantitative measurement. Second, in addition to the evaluation of the results of instruction in terms of pupil growth toward certain goals, there is the continuing need to judge the worth of the goals themselves. Third, there is the further task of assessing the relative appropriateness of the particular instructional procedures followed as compared to other possible alternatives.

Many of the weaknesses in curriculum and instructional planning stem from the weaknesses of the evaluation procedures used. The difficulties inherent in planning for evaluation of all of the significant curriculum goals should not deter teachers from persisting in their attempts to im-

9. Pictures, still and motion—for later observation of performance, appearance, and so on
10. Rating scales—used by teacher, pupils, and others to estimate behavior on specific traits such as courtesy, speech, and legibility of handwriting
11. Recordings—of individual voices and group discussions for later analysis
12. Records of many types—achievement, anecdotal, attendance, auto-biographical, cumulative, disciplinary, health, library, participation (in activities, discussion, elections, and so on), stenographic (of group proceedings) tests, and time studies
13. Self-analyses—made by learners on check lists, rating scales, questionnaires, problem situations, and general questions
14. Written tests—standardized, teacher-made, group-made, to test information and skills

A thoughtful analysis of one or more of the techniques noted above reveals even further the complex nature of their evaluation process. Only a skillful, experienced teacher with the help of tests specialists can gather meaningful evidence that will withstand rigorous professional scrutiny. Every teacher, however, can work to improve his skill in stating his objectives so that he can know what evidence to look for. The teacher then must become familiar with many types of tests and other techniques in order to select those most appropriate. A recent ASCD publication, *Improving Educational Assessment*, includes summaries of tests in the following categories:

Attitude Scales
Creativity
Interaction
Miscellaneous
Motivation
Personality
Readiness
Self Concept¹³

One of the first difficulties encountered in efforts to evaluate pupil process is the difficulty of stating educational goals in ways that can be measured. Periodically in education, there is a movement to state educational goals in precise, measurable terms. The contemporary manifestation of the movement is the behavioral objectives or performance objectives school of practitioners. The resurgence of interest in the behaviorally stated objectives stems in part from the programmed instruction movement. Self-instructional or autoinstructional materials, whether in a teaching machine or programmed book, must be carefully constructed in terms of what the

¹³ Walcott H. Beatty, Chm. and ed., *Improving Educational Assessment and an Inventory of Measures of Affective Behavior* (Washington, D.C.: ASCD, NEA, 1969), pp. 90-143.

student is to *do* or how he is to *perform* in each frame of the program. The impact of behavioral psychologists is felt in this movement also.

Another reason for the reemergence of a specific objectives movement is the realization that statements of goals useful in guiding curriculum planning and setting classroom tone, often need restating in more concrete terms if they are to be evaluated. For example, terms such as *appreciation*, *understanding*, *insights into*, may well suggest approaches, activities, and materials, but they are not very concrete guides for evaluation. Bloom uses an example of a stated goal of "the development of good citizenship" as "so broad and general an aim that it provides little direction for the determination of appropriate learning experiences." He continues:

Educational objectives are frequently stated in such a general form that the teacher who claims a particular objective has great difficulty in communicating what is meant by it to others, and perhaps as much difficulty in determining by himself exactly what was intended. At such a level of generality, the consequences for teaching must be almost nonexistent.¹⁴

Our own position is that goals and objectives should be stated at several levels from general to specific. In reality, the teacher will be able to measure only a sample of student learnings or student growth. We can aspire to a whole galaxy of aims and goals for the student; we can specify certain changes we would expect to see in student behavior as evidence of moving toward these major goals. Our aspirations for our students may be in glowing terms; our "sampling" objectives of necessity will be in measurable terms.

We feel that the behavioral movement offers teachers a useful tool for *sampling* some of the significant goals of instruction. We fear that exclusive use of behaviorally stated objectives will have a severely restricting influence and may inhibit good instructional practice leading toward goals not easily measured.

At one level of planning, the teacher tries to state an overview of what the course is all about—perhaps a major goal such as to have the students experience "the best that has been thought and said in contemporary prose." For purposes of evaluation, however, the teacher needs to translate this general aim into a more specific statement. Performance objectives can be very useful at this level. A legitimate goal of a contemporary American literature class might be for students to "appreciate the distinctive qualities in the writing style of Ernest Hemingway." This goal statement may imply any number of class activities, but appreciation as a goal is not an observable performance. Thorwald Esbensen offers as a

¹⁴ Benjamin S. Bloom, "Testing Cognitive Ability and Achievement," Chap. 8 in N. L. Gage, ed., *Handbook of Research on Teaching* (Skokie, Ill.: Rand McNally & Company, 1963), p. 389.

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¹⁴ Benjamin S. Bloom, "Testing Cognitive Ability and Achievement," Chap. 8 in N. L. Gage, ed., *Handbook of Research on Teaching* (Skokie, Ill.: Rand McNally & Company, 1963), p. 389.

possible statement of desired performance objective in performance terms: "Given ten pairs of short prose passages—each pair having one selection by Ernest Hemingway and one by a different author—the student is able, with at least 90 per cent accuracy, to choose the ten selections written by Hemingway."¹⁵ This objective illustrates the three criteria of a performance objective set out by Mager:

First, identify the terminal behavior by name; we can specify the kind of behavior which will be accepted as evidence that the learner has achieved the objective.

Second, try to further define the desired behavior by describing the important conditions under which the behavior will be expected to occur.

Third, specify the criteria of acceptable performance by describing how well the learner must perform to be considered acceptable.¹⁶

Every objective need not include all three items noted above. As long as the objective specifies a kind of behavior which may be observed, it will qualify as a behavioral objective. Mager offers examples of non-behavioral words open to many interpretations and their behavioral counterparts which are open to fewer interpretations. The examples appear below:

WORDS OPEN TO MANY INTERPRETATIONS	WORDS OPEN TO FEWER INTERPRETATIONS
To know	To write
To understand	To recite
To <i>really</i> understand	To identify
To appreciate	To differentiate
To <i>fully</i> appreciate	To solve
To grasp the significance of	To construct
To enjoy	To list
To believe	To compare
To have faith in	To contrast ¹⁷

In making plans for evaluation of pupil progress, the teacher who uses the phrases in the right-hand column wisely can get a good sampling of evidence that the student is, in fact, reaching the goals implied in the left-hand column.

Several writers have raised objections to the overemphasis on performance objectives. Atkin sums up the most serious objection in the following statement:

If my argument has validity to this point, the possible implications are potentially dangerous. If identification of all worthwhile outcomes in

¹⁵ Thorwald Esbensen, *Working with Individualized Instruction* (Palo Alto, Calif.: Fearon Publishers, 1968), p. 5.

¹⁶ Robert F. Mager, *Preparing Objectives for Programmed Instruction* (Palo Alto, Calif.: Fearon Publishers, 1962), p. 12.

¹⁷ Mager, p. 11.

behavioral terms comes to be commonly accepted and expected, then it is inevitable that, over time, the curriculum will tend to emphasize those elements which have been thus identified. Important outcomes which are detected only with great difficulty and which are translated only rarely into behavioral terms tend to atrophy. They disappear from the curriculum because we spend all the time allotted to us in teaching explicitly for the more readily specifiable learnings to which we have been directed.¹⁸

We feel that this potential hazard can be avoided if instructional planning begins with statements of general objectives and the teacher develops specific objectives, perhaps in behavioral terms, as a means of sampling progress towards the teacher's own understanding of his general goals.

Cooperative and Team Planning at the Classroom Level

This chapter has emphasized the teacher's activities as he plans individually for his own classroom groups. Increasingly, however, the high school teacher is planning cooperatively with one or more professional colleagues to make classroom level instructional decisions. Of course, teachers have always worked cooperatively to make curriculum decisions at the school and department level. In closing, this chapter describes briefly some of the demands of this new kind of teacher planning.

Demands on Time

Time for cooperative planning on a regular basis makes a new demand on the scheduling capabilities of the high schools. Teachers can agree to use one or more of their regularly scheduled individual planning periods for group cooperative planning. This means that these teachers will all have their planning periods scheduled at the same time—a difficult and sometimes impossible feat. Team-teaching plans which provide for one member of the team to work with the pupils while the remaining members plan is one possibility; however, some decisions require the participation of all team members. If a school is fortunate enough to have the services of teacher aides, student aides, or student teachers, these personnel can allow teachers occasional group planning meetings. This is a stop-gap measure also, since some planning may need to involve all the professional and paraprofessional team members. As a result, the teachers' working day schedule in the future must be extended to include time for individual and group planning and for significant in-service staff development activities throughout the school year. A realistic definition of the professional teacher's many roles will require a high school schedule

¹⁸ J. Myron Alkin, "Behavioral Objectives in Curriculum Design: A Cautionary Note," *The Science Teacher*, 35:28 (May 1968).

which provides faculty load time for activities beyond student contact hours. The concept of differentiated staffing discussed in Chapter 11 suggests that some teachers may be given more planning responsibility than others. This will require even more schedule flexibility in the high school of tomorrow.

Demands on Space

As new high school buildings are planned, the space requirements for cooperative planning should be considered. Minor renovation of existing plants can usually provide the basic requirements for group planning. Good teacher planning areas in successful modern high schools typically provide the following features:

Individual planning station. Every teacher should be provided with his own desk, filing cabinet, a small bookcase, and a comfortable desk chair. This furniture can be arranged to provide a measure of visual privacy without load-bearing walls. A large number of these stations can be arranged in the kind of large open-space area which frequently serves as a faculty lounge. Given a choice, we would unhesitatingly give up the gang-type faculty lounge to gain a more professional environment for teacher planning.

Planning conference spaces. Good group planning requires a conference table, conference chairs, and easy access to resource materials. At least one planning conference room should be provided for each major curriculum area.

Workroom and storage areas. A well-planned teacher-planning area will be adjacent to a workroom with typing facilities, duplicating equipment, and audiovisual materials. Tables for scissors and paste activities, collating and stapling, and storage for materials will be available. In some schools, a clerical aide office adjoins the teacher-planning area and offers the above facilities plus the services of aides, including telephone facilities. A modern high school is a busy, complex operation and surely deserves the resources to carry out its assigned jobs just as any other successful enterprise.

Demands on Teachers

Undoubtedly, the greatest demands of cooperative planning are in the realm of interpersonal relationships among the planners. Classroom teachers typically have been trained to consider all relevant factors and then make their own final decisions for their own pupils. Now, it is likely

that the teacher may have to defer to others on the planning team. Or the teacher may have to assume leadership responsibility for making final instructional decisions for assistants on the team. These new professional relationships may threaten some teacher's sense of personal autonomy in the classroom, but increased professionalism is a very real potential of cooperative team planning. Teachers who do undertake cooperative planning efforts should be given help in studying group processes. It may help teachers to know, for example, that many team efforts seem to undergo several difficult stages before becoming an effective, satisfying relationship. One potential hazard is that of *overdependence* on the team leader. Another hazard is that as a result of the problems of overdependence, team members may react against team efforts and *independence* of team effort is sometimes noticed. A healthy *interdependence* comes about as professional teachers persevere in their efforts to work together for the best decisions for individual students in the classroom.

Planning—A Galaxy of Professional Skills

In this chapter, we have looked at many aspects of the planning process at the classroom level. We do not recommend any one system of planning, but we do recognize that planning consists of many skills which can be identified and practiced. The professional teacher is one who studies himself, his subject matter, and his pupils, and develops a system of planning that is comfortable to him, appropriate to the situation, and effective in terms of meeting his goals.

Additionol Suggestions for Further Study

1. Alcorn, Marvin D., James S. Kinder, and Jim R. Schunert, *Better Teaching in Secondary Schools* (3d ed.). New York: Holt, Rinehart and Winston, Inc., 1970. Part two of this text explores many areas relevant to the information in this chapter. Includes illustrations of the various kinds of planning done by teachers.
2. Clark, Leonard H., and Irving S. Starr, *Secondary School Teaching Methods* (2d ed.). New York: Crowell-Collier and Macmillan, Inc., 1967. Emphasizes planning that considers knowledge of the psychological development of the pupils rather than planning solely on the basis of a logical development of subject matter.
3. Eiss, Albert F., and Mary Blatt Harbeck, *Behavioral Objectives in the Affective Domain*. Washington, D.C.: National Science Teachers Association (NEA), 1969. A brief monograph that provides insight into ways behavioral objectives in the affective domain can be stated and ways for evaluation of affective outcomes. Included are numerous illustrative examples.
4. Fremont, Herbert, *How To Teach Mathematics in Secondary Schools*. Philadelphia: W. B. Saunders Company, 1969. Two chapters illustrate the preparation of unit and daily planning and planning for evaluation in this one content area, mathematics.
5. Hippie, Theodore W., *Secondary School Teaching: Problems and Methods*. Pacific Palisades, Calif.: Goodyear Publishing Co., Inc., 1970. A problems-oriented text that allows the reader to become involved in determining solutions to some common problems faced by teachers. The chapters on planning and evaluation give some challenging ideas for consideration. The reader will enjoy the humorous format of the text.
6. Inlow, Gail M., *Maturity in High School Teaching*. Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1970. Planning at the "practical" level is described as being a function of circumstances: long-term and immediate goals, curriculum substance, pupil characteristics, and teacher attributes. Illustrations of unit planning show contrasting styles in planning.
7. Karlin, Muriel Schoenbrun, and Regina Berger, *Successful Methods for Teaching the Slow Learner*. West Nyack, N.Y.: Parker Publishing Co., 1969. Adapts many of the ideas stressed in this chapter to planning instruction for the slow learner. Illustrations are useful whether working with individuals or groups of "slow learners."
8. Oliva, Peter F., and Ralph A. Serafford, *Teaching in a Modern Secondary School*. Columbus, Ohio: Charles E. Merrill Books, Inc., 1965. Several chapters give brief descriptions of instructional planning and include questions for further consideration.
9. Popham, W. James, and Eva L. Baker, *Planning an Instructional Sequence*. Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1970. A programmed text designed to illustrate the planning of instructional activities to promote attainment of explicit objectives. Included are programs on identify-

ing and sequencing learner behaviors, determining appropriate practices to achieve the objectives, and planning for evaluation.

10. Popham, W. James, and Eva L. Baker, *Systematic Instruction*. Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1970. A more detailed companion text to the programmed text *Planning an Instructional Sequence*.

CHAPTER 10

New Trends in Classroom Instruction

The curriculum revolution of the 1950s and the 1960s was accompanied by the emergence of a number of new trends in instructional practices. Some of the new trends in instruction were closely related to the nature of the new curriculum developments. For example, *audio-lingual* foreign language procedures were embedded in a total curriculum package. *Inquiry* and *discovery* approaches were seen as "ways of knowing" in a curriculum based on the structure of the disciplines. Other innovative instructional procedures were associated with contemporary developments in technology—television instruction, programmed learning, computer-assisted instruction, and the like. Some of the trends in instructional techniques grew out of changes in staffing patterns—especially team teaching. Other instructional innovations grew out of the use of "taxonomies" of instructional objectives. The use of systematic observational techniques to measure classroom behavior gave rise to a new language for talking about instruction. Also, the beginning attempts to construct a *theory* or *theories of instruction* which would prescribe the *instructional conditions* and predict *instructional outcomes* must be viewed as an emerging trend.

The impact of these separate lines of development cannot be precisely measured at this time. The cumulative effect of all the intense activity in the area of instruction is seen by some as an "impending revolution in instruction."¹

This chapter summarizes the main features of the most visible innovations in instruction. Each of these developments is subject to much fuller treatment than is possible in one chapter. The reader who wishes further

¹ Harold E. Mitzel, "The Impending Instruction Revolution," *Phi Delta Kappan*, 51: 434-439 (April 1970).

information will find the end of chapter source suggestions contemporary and generative.

Instruction in Variable-Sized Groups

Most instruction in secondary school has typically been conceptualized as occurring in classroom groups of approximately 25 to 30 students. Questions of instructional procedure centered around ways of subgrouping and individualizing within the basic classroom groups. Another way of framing the questions has been proposed by Trump and Bayham. They suggest that teachers answer these questions for each unit they teach:

1. What content and purposes could students of different levels of ability learn and accomplish for themselves with little or no help from me?
2. What content and purposes require motivation, explanation, demonstration, or other presentation by me or by some other competent person?
3. What content and purposes actually require personal interaction among students and between me and the students?²

A considerable number of secondary schools have responded to these questions by scheduling *independent study*, *large-group instruction*, and *small-group instruction*. Schools which schedule students into these arrangements on a formal basis are commonly known as Trump Plan schools, after J. Lloyd Trump, who directed the National Association of Secondary School Principals Commission on the Experimental Study of the Utilization of Staff.³ The Trump Plan calls for some instruction in large groups of 100-150 or more; some instruction in small group settings with 8-15 students, and some independent study (1-4 students). While few schools have met the recommended division of a student's time into 40 percent independent study, 40 percent small-group, and 20 percent large-group, many schools have incorporated some of the Trump Plan features. The school plant building boom of the 1950s and 1960s provided an impetus to changes in school design to accommodate innovations in instruction. Schools were constructed with teaching auditoriums, seminar rooms, learning resource centers with independent study carrels, and a host of special laboratory facilities.

Some types of instructional activity are, by their nature, suited to large group settings; other activities need an intimate environment; some may even call for isolation. School staffs planning to utilize variable size groupings face the task of analyzing curriculum goals to determine which are most efficiently served in what kind of setting. Some suggestions for

² J. Lloyd Trump and Dorsey Bayham, *Focus on Change* (Skokie, Ill.: Rand McNally & Company, 1961), p. 114.

³ For descriptions of some of the experiments in staff utilization, see the January issues of the *Bulletin of the National Association of Secondary School Principals*, 1958-1962.

working with large groups, small groups, and individual study projects are included below.

Uses of Large-Group Instruction

While all learning is individual learning, much instruction takes place in a group setting. What are the instructional activities which lend themselves to large-group methods? We use the term *large group* to mean any number of students too large for active and frequent personal interchange with the teacher and with classmates. In most cases, this would be any grouping of more than 20 or 25 students. Some would argue that any group of more than 15 or so becomes unwieldy for purposes other than large-group. We do not feel there is a magic number that separates large from small groups. The point is that the use of large-group arrangements is feasible for some instructional purposes. Large-group settings may be used to serve the purposes of *learning to cope with bigness*, *conveying information*, and *handling special events*.

Learning to cope with bigness. Bigness is an inescapable fact of modern life. Future citizens will spend much time in mass enterprises. The young adults in our high schools need guided experiences in understanding the dynamics of large groups. They need practice in using the tools and techniques of large-group presentation. *Learning to work effectively in large groups has become a valid curriculum goal.*

Conveying information. Certain activities which are primarily informational in nature can be handled efficiently in large-group settings. A "key" lecture to introduce and define the scope of a broad unit, a demonstration of properties and processes, a film showing of wide interest, and certain nonparticipatory portions of an orientation program are examples of large-group activities. It is important that these activities be followed by small interaction groups for further depth.

Special events. The young adults in today's high schools are coming to grips with the pressing issues of ecology, population density, human relationships, international affairs, and national priorities. Outstanding speakers, noted authorities, elected officials, space explorers, and famed authors are realizing the significance of an informed, concerned high school population. Careful use of large-group instructional facilities can bring the high school audience into contact with a wide range of talented resource people. While the mass audience situation does have limitations, it does contain potentials for inspiring, motivating, and challenging the minds and the emotions of high school students. Student assemblies, campaigns, elections, panels, forums, teach-ins and similar activities can be used to accomplish some of the secondary school's curriculum goals.

Ways of Working with Large Groups

This section is *not* intended as a *methods handbook* or a how-to-teach guide. No magic formulas for successful large-group instruction are known to us. There are certain general considerations growing out of the nature of a large-group environment that should serve as *guidelines* for working with large groups. Some of these important considerations are discussed below:

Definiteness in procedures and routines. Experienced teachers of large groups report that large groups which begin immediately and proceed without interruption are generally successful in avoiding confusion and disorder. Assistants or proctors can be used in larger groups (65-150) to distribute necessary materials and to attend to individual matters as they arise. There should be clear understanding about seating arrangements, whether questions are oral or submitted in writing, signals used to change activities, procedures for leaving the area, and other routines.

Explicitness in presentation of ideas and information. Successful large-group instruction is characterized by clarity and simplicity in style. Major points should be clearly identified and kept to a minimum number. Providing students skeleton outlines with blank spaces for student notes is a useful device for fixing major points in sequence. The organizing principle (chronological, topical, cause and effect, accumulative, or other) of each large-group session should be clear.

Variation in mode and pace of activities. The dominant activity mode in large-group instruction is passive-receptive. By careful pacing of active-learning behavior, the large-group instruction period can be made livelier and more productive. Experienced large-group instructors frequently use the following kinds of expressions to engage their students actively in the intellectual process:

"Think of two implications of this action."

"Write a short phrase that expresses your feelings about that last point."

"Look at your notes and nod if you have written . . . (any key word or phrase)."

"Raise your hand if you think that was a good move."

"Raise your hand if you think that was a bad move."

"Turn to your buzz group and develop one or two questions for feedback session."

Wise use of audio and visual materials helps vary the pace of the large-group instruction period. The experienced large-group instructor watches for clues to "sensory overload" and switches to another mode when the clues appear. For example, very few films have sufficient impact to engage the attention of large numbers of students for more than a few

minutes at a time. Short film clips, brief filmstrip sequences, and even briefer audio tapes are recommended for groups of over-standard class size.

Advantages of Large-Group Instruction

As we view the secondary school, we find very few purposes which are best served by large-group instruction. The schools do face a mass education task, however, and large-group instruction can offer certain logistical and organizational advantages. Some of the advantages claimed by proponents of large-group plans are discussed below:

Efficiency. Why should the same basic lecture be repeated four or five times to different sections? If there are common elements in a given learning unit, these may be presented in a large-group lecture to all of the sections, thereby eliminating the need for the teacher to repeat the same information several times. If several sections, for example, are to view a film, one showing of the film to a total group rather than scheduling four or five showings during the day or even through the week will promote efficiency and prevent repetitiveness.

Economy. When large numbers of students come together to hear a guest speaker, to take a group test, to participate in an orientation program, or similar event, the advantage of economy of time is gained. The time gained may be used for small groups or individuals to pursue a subject in depth.

Higher quality of presentation. Some of the instruction in secondary schools will of necessity be in the form of lecture presentation. The large-group instruction plan may allow teachers with particular skills to become specialists in large-group presentations. They may spend a great deal of time sharpening and polishing a few key lectures, preparing the appropriate visual aids, planning follow-up of activities and the like. When an instructor knows that his lecture is expected to motivate, inform, and direct large numbers of students, perhaps accompanied by their teachers, the quality of the presentation can be expected to improve.

Better utilization of materials and facilities. Well-equipped teaching auditoriums provide a wide range of instructional aids to enhance presentation. Permanently installed and scientifically placed overhead projection facilities, including multiple screens for simultaneous filmstrips, slide or video projection, acoustically balanced audio presentations, taping and instant replay facilities, and the like can be provided in a centralized facility. The use of these aids can intensify and amplify the impact of instruction through multisensory stimulation.

Some Cautions with Regard to Large-Group Instruction

Large-group instruction may be appropriate for only a very few learning purposes in secondary schools. The overuse of large-group instruction, particularly the use of this plan for an entire course, is to be avoided. Large-group instruction should be followed up by small-group and individual-study activities. Indeed, the main justification for the use of large-group instruction is to achieve a savings in time in order to allow the teacher to engage in more productive activities such as guiding individual studies, preparing better plans and materials, evaluating procedures, and deepening his own scholarship.

School decision-makers are urged to exercise much caution in the construction of school plants to accommodate large-group instruction. Once a large-group lecture auditorium is constructed, it must be scheduled frequently throughout the day and throughout the week to meet utilization standards for school buildings. This means that teachers may find themselves planning large-group lectures not because of instructional needs but because of scheduling demands.

A most serious drawback of large-group instruction is the nonparticipatory nature of the activity. Large group instruction should be followed by small-group interaction and individual study to gain the advantages of learning by active participatory means.⁴

Uses of Small-Group Instruction

The small-group setting may be used very productively for those kinds of learnings we just noted missing from the large-group plan—active participation of the learner, interaction between teacher and student, interaction among students, exploration in depth rather than information acquisition. Small-group instruction may be a regularly scheduled learning activity consisting of four or five up to a dozen or fifteen students who meet in small-group seminar or conference facilities with the teacher or teacher assistant. More frequently, small-group work occurs within the framework of the regular classroom of 30 when the teacher subdivides the group. Small-group instruction serves such important purposes as the following:

small-group interactions. Skill in cooperative goal-setting, understanding of individual responsibility for group results, practice in evaluating goal processes, knowledge of different kinds of group structure—these are valid goals which can be met in small groups.

Information exchange. While information may be imparted efficiently in large groups, small groups are necessary for effective information exchange activities. As different students present new information and new ideas, the small-group setting allows different points of view to be identified and discussed. It is in this setting that one learns the effect of point of view on information. The processes of selection and interpretation of fact, context in which information is presented, speaker's purpose, and the like can be studied. A distinction is sometimes made between a *seminar* group and a *discussion* group. In the seminar group, the learners have the responsibility for bringing information, facts, ideas from a variety of sources, and research findings. This information is then exchanged and the implications discussed. A *discussion* group is useful for exchanging opinions and opening up new areas for study.

Exploration of concepts, themes, principles, attitudes, and values. The small group is an excellent setting for exploring in depth the meanings and implications beyond the simple information level. The small group can be used to search out relationships between and among the learnings from several areas. As students carry on dialogues about the meanings and relationships, opportunities for discovering underlying principles can be seen to multiply.

Tutorial purposes. Small groups may be structured so that students can help each other clarify and reinforce learning goals. Students in small groups can help each other through drill and practice on needed skills, review of important content, and discussion of concepts to clear up confusion and possible misunderstandings. High school students can learn much from each other in these groupings.

Problem-solving purposes. A very common use of the small group is the study committee, or task force, to attack an intellectual, social, physical, or environmental problem. Study committees and action committees are special kinds of small groups which may be used very effectively in the school environment and have valuable carry-over into public and civic life. This kind of group may grow out of any of the students' areas for study. For example, ecology study may result in a student committee to study the effects of local industry on the environment. The study committee may trigger an action committee to inform the public or to generate support for change in procedures or regulations.

Stimulation of new ideas. Sometimes small groups are formed for the purpose of developing creative and alternative procedures, systems, experiments, and so forth through brain storming and other stimulation processes, including role-playing sessions and the like. The motivational possibilities of this kind of group should not be overlooked.

Feedback and evaluation purposes. The small group provides an excellent opportunity for assessing quality of student learning, depth of understanding, growth in ability to apply and evaluate the course learnings. The small group can provide clues for modifying the instructional goals, adding new topics, spending more time on topics which have not been fully developed, or even changing directions radically. This kind of feedback is useful for keeping instruction meaningful to students.

Ways of Working with Small Groups

Working with small groups can be a demanding and complex challenge for secondary school teachers. From time to time the comment is heard that, "Well, we tried small groups but it didn't work in our school. We had problems of noise and discipline, and some students didn't do their share of work." In some instances, teachers have found that while students seem to like small-group work, too much time was spent in nonproductive discussion of biases and opinions and that the end result was "pooled ignorance." These very real problems indicate the need for more systematic study and practice on small-group skills in the preservice and in-service programs for teachers. Increasingly, teachers are learning the dynamics of small groups, developing procedures for facilitating group work, and expanding the possibilities of group work in the classroom and throughout the school. Consideration of some of the points noted below should help teachers work more effectively with small groups.

Importance of clarifying the function of the group. The working procedures of small groups will vary according to the purpose or purposes envisioned for the small group. Is this to be a task group with a job to be performed? Is this to be a brainstorming group with free flow of ideas and "anything goes?" Is this a skills study group? Students should learn to identify the most appropriate ways of working in these various types of groups. The product outcomes, the time intervals, evaluation procedures, and other routines should be known and understood. Time spent at the outset to clarify these issues will pay off in improved efficiency and greater effectiveness.

Importance of teacher role in small groups. The teacher will serve several roles in small groups depending on the purposes of the group and the

level of sophistication of the students in using small-group procedures. In general, the skillful small-group instructor avoids taking the dominant role in small groups. At times the teacher will be a consultant to the group providing information or suggesting sources of information as the group "consults" him. At other times, the teacher will serve as evaluator or critic of the group's progress. Occasionally, the teacher may join the group as a discussant and will take his turn along with the students in exploring the topic for discussion. The teacher should avoid answering questions that are a part of the student's problem-solving task. Also, teacher behavior in a small group differs from teacher behavior in a large group. For example, a small-group instruction leader would avoid reading questions from a mimeographed list and having students give the "right" answer. In a small group, a question is raised not to get the right answer but to get the students' feelings about the answer, alternative answers, reasons for particular answers, implications of different answers, and the like.

Importance of evaluation procedures. The cooperative product of a group effort poses a complicated evaluation problem. Some students will have contributed much to the group product and others will have contributed little or nothing. Some, in fact, may have impeded group progress. Should all students receive the same evaluation for the group project? Several ways of dealing with this problem have emerged from practice. Sometimes it is possible to identify the sections of the group report done by each individual. This is the case when a group project is subdivided and each person does a separate piece of work which is then combined to the final product. Other projects, however, are really total group efforts which defy individual contribution identification. In such cases, it is best that each student receive the same evaluation for the project regardless of what the teacher may know about differences in individual contributions. That is, if a group project receives an excellent evaluation, the student who did nothing should receive "excellent" along with the student who may have done most of the work. If the group project receives a low rating, each member must accept responsibility for the inadequacy. This is the way students can learn the meaning of an individual's responsibility for group action. After all, a group is made up of single individuals. Some teachers have been successful in developing a system for group rating of individual contribution to group work. During the unit of work in which the small group project is under way, each student rates himself and his classmates anonymously. These rating sheets can provide feedback to individuals as to how they are perceived as group members. If small-group work is to be maximally productive, class time must be used to evaluate group procedures.

Importance of physical environment. Small groups can be organized quickly in a standard classroom by having students rearrange their desks to

Independent study for greater depth. In most high school classes, there are some few students whose particular interests and talents enable them to go beyond the goals of the course. For these students, independent-study plans may be used to allow the student to pursue in depth the particular area of the curriculum in which he has special talent or interest. The student may need the stimulation and direction of the class for much of the curriculum, but he may be excused from class attendance to pursue individual research on special topics of interest to him and related to the overall course. A typical example would be a student gifted in science who needs the class work for instruction in some areas, but whose insight into the ways of working in science allow him to go far beyond even his instructors in the class. Many modern high schools have a good record of providing such students with time, encouragement, and resources to pursue these depth studies.

Independent study in lieu of regular classroom instruction. Some schools have successfully individualized instruction for students by identifying those mature, self-directed students who can organize their own syllabus and study independently, coming together for occasional seminars with each other and with the teacher, in effect creating their own course of study. An outstanding example of this kind of independent study was seen at Nova High School during the first year of operation when some 12 to 15 tenth-year students developed their own United States history program. These students were responsible for all of the work of the regular courses, but they were free to attend or not attend the class lectures and group activities. The only requirement was a two-hour seminar every Friday attended by the instructor or other instructional personnel. The enthusiasm of the students for the work and the quality of their products was encouraging evidence of the efficacy of this kind of study.

Independent study in avocational and vocational areas. Some students have avocational and vocational interests which may not necessarily be related to any of the school's curriculum areas. Independent study projects which allow students to explore fields of work, hobbies, and recreation should be scheduled. Resources, both human and material, should be budgeted in those schools seriously attempting to provide for wide ranges of individual differences.

The Teacher's Role in Independent Study

The crucial nature of the teacher's role in working with independent study is implied in the term independent study itself. If the study is to be truly independent, how can the teacher have a role to play? It is clear that if the teacher is too directive, he defeats the purpose of independent study.

On the other hand, for a teacher to assume no responsibility assumes that students are already skilled in self-directed study. Since they are not, the teacher does have a significantly vital role to play. Working with independent study requires a special kind of teaching skill. The first requisite of a successful independent study teacher has been described by Alexander and Hines in these words:

The educator who exemplifies the independent study teacher in today's schools is one who sees youth as: Modifiable rather than static, capable rather than incapable, trustworthy rather than unreliable, able to become self-sufficient rather than dependent, searching rather than satiated, possessing unlimited potential rather than limited potential, intrinsically motivated rather than dependent upon extrinsic forces.⁵

Many teachers realize that their young adult high school students have these potentials, but not all teachers are able to translate this attitude into effective instructional practice. Teachers need systematic in-service training to become skilled independent study teachers. Below are discussed some of the areas of responsibility for which teachers must develop skills:

Teaching skills of independent study. Teachers of independent study students must be prepared to give guidance in skills needed for independent study as the need arises in practice. Additionally, some direct instruction in basic skills of independent study should be planned. Learning how to learn independently requires deliberate teaching of the necessary techniques. Challenging learning activities, guided experiences in problem identification, and practice in the independent gathering, evaluating, and organizing of information to be applied to problem resolution are mandatory.⁶

In addition to the usual library skills, skills of planning and budgeting time, assessing relative importance of different alternatives, selection and elimination, organizing, drawing conclusions, making inferences, meeting deadlines, and the like can be identified and practiced. Some schools have a one-semester or longer preparatory period for working on skills of independent study before students are allowed to undertake long-term independent study projects. Other schools use independent study as a way of learning independent-study skills. Probably a combination of direct instruction in the skills and using the skills in independent study is the most often followed method.

Structuring independent study policies and procedures. The effectiveness of independent study programs is related to the quality of systematic plan-

⁵ William M. Alexander, Vynce A. Hines, and associates, *Independent Study in Secondary Schools* (New York: Holt, Rinehart and Winston, Inc., 1967), p. 118.

⁶ See Alexander, Hines, and associates, p. 132, for a discussion of these skills.

ning of procedures and policies and rules and regulations governing independent study. Some schools have adopted arbitrary schedules of "up to 40 percent of the time in independent study," without developing the concomitant skills or necessary understandings of the limits of independent study. In addition to regulations about who shall participate in how much independent study and at what levels, teachers in independent-study programs have the responsibility for preparing courses of study, course outlines, and syllabi for initial independent study plans within a curriculum area. Beginning students in independent study need to know how long they should work on a project, where they should be, how many materials and what kind should be consulted, when they should report to the teacher for progress reports, and many other details. Obviously, many of these decisions will become student decisions as experience is gained. In the beginning, however, clearly stated policies are beneficial. Teachers need to study the rationale and the experience of other independent study programs in order to get a background for making their own plans.

Interpreting the program to pupils and the public. Some independent study programs have been launched with great enthusiasm only to slow down and fail after a brief period. Analysis of independent study programs which have appeared and then disappeared reveals a lack of understanding on the part of faculty and students as to what independent study is and what it is not. Sometimes parents have misinterpreted the open-ended nature of independent study assignments as teacher laxness. The flexible nature of the assignment is sometimes interpreted by students as an "anything goes" policy. Some parents worry about discipline when independent study is done on school time, but not necessarily in the classroom with the teacher. In some schools, librarians have been inundated by students who have been assigned independent study but have, in fact, become dependent upon the library and the librarian. Teachers who are enthusiastic about using independent study must be prepared to speak to parent groups, civic groups, and faculty meetings to explain, to answer questions, to give examples, and to make modifications in the plans in the light of the school's readiness. Time spent in thinking through some of the public relations and communications tasks in advance of launching an independent-study program can save valuable time later.

Arranging for materials and facilities. Successful independent-study plans inevitably place great demands on the school's printed materials and other resources. Independent-study teachers need to become familiar with sources of free and inexpensive materials. They must cooperate with the librarian in developing a rich resource file of materials including filmstrips, audio and video taped materials, and programmed instructional materials. Individual study carrels for use of these materials are an asset which can be

managed by most schools through the cooperation of staff and administrators and the clear dedication to the values of independent study.

Handling administrative details. The flexible nature of independent-study plans places new demands on the teacher as administrator—working out flexible schedules so that students may pursue studies in depth; arranging meeting rooms; scheduling the library; keeping records; setting up field trips; developing files of resources; and other administrative details that are time-consuming but necessary activities.

Evaluating independent-study programs and plans. Evaluation of independent study is a twofold task. The teacher must evaluate the program components in the light of their contribution to the goals of independent study. Additionally, means for evaluating students' participation in independent study and the products of their study must be developed. Alexander and Hines list six specific behaviors as aims of independent study. Evaluation of independent study plans would look for evidence of these behaviors:

1. The independent learner undertakes on his own initiative learning tasks that are important to him.
2. He uses sources of information efficiently.
3. He tests reflectively possible answers, solutions, ideas, to see whether they are adequate.
4. He seeks to apply generalizations from former to new situations.
5. He is not easily discouraged by the difficulty of the learning task nor by forces which would have him accept inadequate answers, solutions, and ideas.
6. He enjoys learning and seeks opportunities to learn.⁷

Using these criteria, independent-study teachers would list the kinds of evidence they would look for to see that the learner was undertaking tasks on his own initiative. They would use such techniques as shadow studies, interviews, reports of student satisfaction, and so forth as clues. A second major task is setting up evaluative criteria with the student. Self-evaluation becomes a main goal.

The Impact of Instructional Technology on Classroom Practice in the High School

The rapid growth of technology in all segments of contemporary society began to spill over into education in the mid 1950s. Educational television and programmed instruction began to excite more interest than radio and films had done in earlier decades. For a brief period, the edu-

⁷ Alexander, Hines, and associates, p. 147.

tional literature contained such phrases as "teaching machines can never replace the teacher" in order to allay the anxieties raised by the attendant publicity at the birth of this instructional device. In the 1960s, the professional literature began to see articles and books concerning the uses of the newer media, and commercial publishers entered the market with a variety of machines, programs, and paraphernalia. Philanthropic foundations and federal agencies entered the act. Finally, even the popular press began to carry feature stories about the "revolution in instruction." New school architecture began to provide for closed circuit television facilities. Studio and production centers began to appear in the schools. Then in the middle 1960s, computer-assisted instruction began to offer teachers the possibilities of individualizing instruction beyond their wildest dreams of the past. School libraries began to change in appearance and function. In fact, the label "library" began to fall into disuse as schools opened "learning resources centers" or "instructional materials centers." By 1963, one major educational association was ready to devote an entire issue of its journal to the subject of programmed instruction.* The traditional time lag in education had seemingly been shortened and a wide adoption of many innovative practices seemed assured.

In spite of all this activity, however, it is still too early to measure the impact of technology on instruction in the schools. At this point in time, the following general conclusions seem reasonable:

1. *An impressive arsenal of hardware and the concomitant software is available for educational use.* A recent major development has been the merger of large electronics hardware industries with book publishing firms, and the entry into the materials and media field of such industry giants as Time, Inc. setting up educational enterprises to serve the new market. The National Audio Visual Association is distributing a 35-minute multimedia presentation of the potential of the new media. This presentation entitled "The Knowledge Industry" is available from the Association for use by school systems and other interested groups. Chapter 7 describes the growth of this industry in some detail.

In a recent report on innovations in education, Unruh and Alexander state a position toward the advent of technology with which this section is in agreement:

In our fast-moving technological age, educators cannot choose to be nonparticipants. Modern man, from the time he wakes to the clock radio in the morning until he snaps off his television at night, is caught up in the Age of Technology. Thus, the real question is not whether schools shall use the technological media and materials but how and when to use them.⁹

* *Phi Delta Kappan*, 44:6 (March 1963).

⁹ Glenys G. Unruh and William M. Alexander, *Innovations in Secondary Education* (New York: Holt, Rinehart and Winston, Inc., 1970), p. 158.

2. A body of research literature comparing the newer media of instruction with nontechnologically assisted instruction supports the feasibility and effectiveness of the newer technologies for particular kinds of learning goals. Wilbur Schramm, a leading student of the new technology, observed in the *New Educational Media* that:

Given a reasonably favorable situation, a pupil will learn from any medium . . . a pupil neither turns off nor turns on his learning when he moves his attention from a teacher to one of the media, or vice versa. In general, the same things that control the amount of learning from a teacher face to face, also control the amount of learning from educational media—among others, the relevance and clarity of the content, individual abilities, motivation to learn, attention, interest in the subject, respect and affection for the teacher, emphasis and replication of the central points to be learned, and rehearsal by the learner.¹⁰

3. A major difference between the newer media of instruction and the more traditional audiovisual aids is that the newer media indeed constitute instruction, not merely aids to instruction. This has proved a very difficult concept for curriculum workers and instructional personnel to grasp. There is a fundamental difference from the teacher's casting around to find a picture or film to motivate or to illustrate a particular unit of study and the use of the new curriculum package which includes its own rationale, sequence, and evaluation procedures. Some of the new curriculum projects have been accompanied by films which carry the major burden of instruction. Additionally, some entire courses in some schools are televised. When media become instruction rather than aids to instruction, the teacher's role is somewhat different and the teacher needs preparation to use these possibilities creatively and effectively.

4. In spite of the large-scale developments in some areas, widespread use of the newer media is missing in many schools. Unruh and Alexander, in the volume mentioned above, indicate that less than one percent of the total national educational budget is spent for learning media and instructional aids.¹¹ In spite of this, however, all observers predict accelerated use of newer media in the immediate and long-range future.

Television

In this section, we briefly survey the teacher's role in the use of technology in the high school. No attempt is made to present a manual of instruction for the use of media systems, but instead we present some guidelines for the teacher's own planning.

¹⁰ Wilbur Schramm, "Instructional Television Here and Abroad," *The Schools and the Challenge of Innovation* (New York: McGraw-Hill, Inc., 1969), p. 65.

¹¹ Unruh and Alexander, p. 158.

Instructional television. More than a decade of experience with instructional television has shown that this medium can be used to contribute substantially in the classroom and in out-of-school study groups. Several different kinds of television use are now available for classroom purposes. The teacher who plans carefully can find television a useful extension of the teacher's own resources.

Commercial broadcast TV. Many fine educationally significant programs are carried on regular commercial TV outside regular school hours. The teacher should make a point of reviewing upcoming television programs and calling students' attention to promising programs. When the program is closely related to class goals, television viewing may be seen as an important assignment. Class time may be used to think of the kinds of problems the television program may shed light on. Students and the teacher may spend class time after the program discussing its merits as a television program and its contributions to the unit of study. Students' television viewing habits can be influenced through appropriate and friendly dialogue.

Course programming on instructional television. In some school systems, a major portion of the curriculum for some courses is broadcast over the school's closed circuit or educational television channel. Sometimes this instruction may take place in a large teaching auditorium. Schramm discusses this use of television in the following words:

The best way is to use ITV and the kind of team teaching, in which the teacher in the studio, the teacher in the classroom, and perhaps other teachers who prepare materials, cooperate in creating a superior learning experience for the pupils. Clearly, this approach will change the role of the teacher in the classroom. It is not necessarily a lesser role—indeed, it is one that many teachers might welcome since it would free them from some of the responsibility for "telling the class" and let them give more individual attention to the pupils; thus their new role has the potential to add a new dimension to the learning experience. Moreover, it is not a solitary role. The teacher is no longer a complete master of his own classroom. He shares the attention of his pupils with able teachers on the picture tube. He yields part or all the authority to determine and schedule basic content. This is an unfamiliar role and doubtless, for many teachers, an uncomfortable one.¹²

Very few high school courses can be justifiably carried whole over television, but where a decision has been made to carry the course on television, the classroom teacher's role is potentially very dynamic. Instead of being *presenter*, the classroom teacher becomes an *interpreter*. Also, the

¹² Schramm, p. 267.

classroom teacher thinks of ways to lead the students' thinking beyond the television presentation. He suggests different ways of thinking about the same material, asks the students to challenge some of the facts by looking for materials from other points of view. If the teacher can resist seeing the television teacher as competitor in this advisory role, the possibilities for creative and dynamic dialogue can be stimulating and productive. It is a very appealing role for teachers who are interested in capitalizing on the potentials of the medium.

Television production as an instructional activity. Increasing numbers of new high schools include their own television production studio facilities for use by students as a part of the language arts or journalism communications course or as an exploratory elective. The Nova High School, in Fort Lauderdale, Florida, has pioneered in student-produced television shows. Until recently, the school day began with the school's own Today Show produced, written, directed, and filmed by the students in the school's television studio. Avocational and vocational possibilities of this activity should be considered by school planners. As inexpensive video tape machines become more available, this use will undoubtedly increase in high schools.

Closed circuit television for in-service teacher development. A promising use of closed circuit television in the schools is that of a "mirror on instruction." A portion of a teacher's class can be video taped and then replayed for analysis and evaluation. As teachers become accustomed to using this kind of feedback, they can then proceed to use the same technique in discussion with students. When students are given this graphic, immediate feedback of classroom behaviors, with the opportunity to analyze and discuss the implications, the term relevance in curriculum becomes meaningful.

Film

The use of filmed presentation provides instantaneous and graphic interaction with the classic past, the present scene, and the future's possibilities. A wide variety of 8- and 16-millimeter filmed materials, and film-strip materials in every field have been available to secondary school teachers for several decades. Yet the motion picture and the still-frame picture resources are poorly utilized in many classrooms. The difficulties of getting the film and projection equipment into properly darkened facilities just at the critical use moment have been frequent inhibitors of use. Even more serious has been the teachers' lack of training in film use techniques. Another drawback is described by Wagner:

The motion picture is little more than 50 years old, but in perspective it appears to have advanced very little since its early beginning. Some critics, indeed, feel that both film and its half-brother, television, are dying of old age.¹³

He mentions the formula—film and teacher misuse as contributing reasons for the obsolescence:

Too many teachers, for example, expect a film to do much more than any film is capable of doing, and reject many pictures for sometimes minor deficiency which they, themselves, could easily correct or even turn to good account. . . . The point I am emphasizing is that the responsibility for avoiding the formula film and for pushing the medium along is in large part a function of those who use the motion pictures as well as those who sponsor, plan, and produce such films.¹⁴

Every teacher has his store of horror tales about the use of audio-visual "aids." Just as the class is primed for viewing, the bulb burns out, or the film loop breaks, or there is no film on the day the class reaches the point in the unit where the film was scheduled. A few such experiences and many teachers are willing to give up trying to use "hardware." Many recent developments have tended to improve this situation. The relatively large sums of money made available through the several titles of the National Defense Education Act, and the involvement of large foundations have produced media designed especially for educational environments. School architects have done a similar job in designing school environments to accommodate the newer technologies. School systems have been given matching funds to acquire the products of the new technology. Those developments which have particular relevance to film use are briefly reviewed below:

Using television receivers to show film. Those high schools which are fortunate enough to have the resources of a television studio can project the 16-millimeter film over the school's closed circuit television channels. This eliminates the need for bringing heavy projection equipment to the classrooms and also does away with the handicap of blackout curtains. For example, schools such as the Nova High School, in Fort Lauderdale, make frequent and effective use of this technique. Every classroom has a permanently mounted television receiver connected to the school's closed circuit television studio. More and more schools will be constructed with these kinds of facilities in the future. Even in 1963, more than 600 such installations were already in the schools.

¹³ Robert W. Wagner, "The Creative Educational Film," *Instructional Technology*, Frederick G. Knirk and John W. Childs, eds. (New York: Holt, Rinehart and Winston, Inc., 1968), p. 106.

¹⁴ Wagner, pp. 107-108.

Using high impact film shorts. McFadden, at the University of Florida, has coined the phrase "high impact film shorts" to cover the whole host of recent developments including single concept films, film clips ranging from seconds to a few minutes, video tape recording of critical incidents, and other "freeze action" devices.¹⁵ A distinct advantage of these techniques is the immediate interaction possibilities between students and the medium. A feature-length film will contain many images provoking many reactions. A short clip or a single concept loop permits the teacher and the student to zero in on the concept or the skill or the image. Small, inexpensive, technicolor cartridge loading projectors with stop frame devices are now available for classroom use. This use of film gives the teacher and the student much greater control over the selection and pacing of the instructional program.

Using films in series. Until recently, films have been used as occasional aids to classroom instruction—to illustrate, to demonstrate, and to motivate. Many of the curriculum projects mentioned in earlier chapters developed textbook materials, laboratory exercises, and film series which, in effect, constitute the work of an entire course. In our view, the decision to use a film series to carry the burden of instruction for an entire course is a questionable one, probably justified only when there are no available teachers in the school. Even then, supervisory personnel working with teaching aids must be able to guide the pupils through their filmed course by reading the manuals which accompany these materials, and by arranging supplementary materials and exercises. The major difficulty, as we see it, with the total filmed course is the passive, inactive nature of the learning. When the classroom teacher can work with the films to engage the pupils in experimentation and dialogue regarding the meanings and implications of the experiments, the films can be a useful adjunct to instruction.

Using film for individual study. Until recently, all instructional film viewing has been a large group activity. Many of the new developments in 8-millimeter film include viewing devices for use in individual-study stations or carrels. The single-concept film, a two- or three-minute film on a self-winding cartridge, is particularly suited for individual viewing and listening. Study carrels can be equipped with earphones to allow the sound isolation needed. Several manufacturers have well-designed listening and viewing devices for filmstrips, tapes, sound filmstrips, video tape recorders, and

¹⁵ The authors are indebted here to Ron McFadden and Milton Diehl, advanced graduate students at the University of Florida, for reading this part of the manuscript and giving reactions from a student point of view. These students were able to contribute solid suggestions from their recent studies and experiences with a variety of newer instructional technologies.

such. These materials can often be used on the school's closed circuit television for projection to large groups or into individual study booths. The teacher's role in utilizing these materials is to guide the student to those resources most relevant to his particular area of study. As we view the field of film, we see the use of 8-millimeter and single-concept films primarily for individual instruction in the school of the future. Some of the multimedia systems, which have been developing to include a phonograph record or audio tape along with film projection of the story or illustrations of the story or illustrations of the story, will be seen in learning resource centers of the future.

Student filming as class instructional activity. High school classes are beginning to see the possibilities of film making as a way of learning about man in his environment. Inexpensive filming and production equipment are within the means of most high school budgets. Marshall McLuhan states in *The Medium Is the Message* that:

The student finds no means of involvement for himself and cannot discover how the educational scheme relates to his mythic world of electronically processed data and experience, that is, that his clear and direct responses report. . . . The classroom is now in a vital struggle for survival with the immensely persuasive "outside" world created by new informational media. Education must shift from instruction, from imposing of stencils, to discovery—to probing and exploration and to the recognition of the language of forms.¹⁴

Some high schools are beginning to provide inexpensive hand-held movie cameras to students to use in projects just as teachers used to assign students to the library and to the encyclopedia. Using the camera as another "eye on the world" can help teach observation, perspective, imagery, symbolization, and other higher processes of intellect.

Individualized Instruction

As indicated in Chapter 8, the search for individualization is never-ending, and the trends in the current chapter are parts of that search. Even the emerging mass-group practices including large-group instruction and instructional television are related to individualization when they are used to gain time for small group and independent-study opportunities. Programmed instruction and computer-assisted instruction promise to individualize beyond the wildest dreams of the past. They also have the capacity to impersonalize and make instruction mechanistic. Our own view is that these materials, programs, machines, and other technological advances may

¹⁴ Marshall McLuhan and Quentin Fiore, *The Medium Is the Message* (New York: Bantam Books, 1967), p. 100.

be used by the professional to gain time to personalize as well as to individualize the program for every student.

Programmed Instruction

The high priority given to the goal of *individualized instruction* in American education has led to a continual search for procedures and materials for allowing each learner to progress at his own rate and in varying directions. The idea of a "teaching machine" that would direct the learning processes automatically, systematically, and effectively has long been one direction taken in this search for individualized means of instructing students. As early as the 1920s, the Pressey teaching machine was heralded as an "educational breakthrough." After World War II, there was another flurry of interest in teaching machines. A teaching machine is basically a device for presenting "frames" (small bits of information) of a "program" (the material to be learned) in a sequence which depends upon the response of the learner.

Educators soon realized that the machine or "hardware" is a non-essential item. The *program* or "software" consisting of the learning material arranged in small, sequential increments is the essential element, and recent developments speak of *programmed instruction* rather than teaching machines.

Uses of Programmed Instruction

The concept of programmed instruction is derived primarily from the work of behaviorist psychologists emphasizing gradual progression, control of learner response, immediate reinforcement, and immediate feedback. Some educators hold that programmed learning is inadequate to deal with the higher aims of education. We agree that the most valuable learnings in the classroom occur from the interactions between teacher and student, and interactions between and among students. The quality of interaction in the classroom is dependent upon many variables including informational content and basic skills. Controlling the rate and appropriate level of content drill and skills practice through programmed materials may well gain extra time for teacher-pupil interaction concerning the personal and social meanings of learning. In a review of developments in programming of instruction, Glaser concludes:

The concept of programmed instruction focuses attention more than ever on the instructional procedures employed to guide student behavior from present skills to subject matter competence. With respect to individual differences, the question becomes one of defining the entering behavior of the student with which instruction must begin to teach terminal objectives. The individual's entering behavior will recommend

one instructional sequence rather than another. Essentially the question becomes a very practical one that asks what the student can do now that can be used to get him where he would like to go, and whether he can get there at this point in his history. Put this way, the instructional situation becomes an engineering and management enterprise in which the interaction between the learner and the educational process can be used for making a prediction about practical possibilities for educational accomplishment.¹⁷

According to Komoski, programming is based upon principles from experimental psychology that:

The best environment for learning is one in which: (1) the learner is active; (2) the learner gets frequent and immediate feedback on his performance; (3) learning proceeds gradually from the less complex toward the more complex in an orderly sequence; (4) the learner is allowed to develop his own best pace of learning; and the teacher's strategies are constantly reappraised on the basis of an objective analysis of the learner's activity.¹⁸

Most high school teachers would agree that these are desirable principles to guide many learning tasks. It may be questioned, however, whether programmed instructional materials, as they presently exist, are adequate to serve these principles. The generally low quality of many available materials has been noted by researchers.¹⁹ While many materials are on the market, finding suitable materials of high quality requires a level of skill not possessed by many schools. In spite of these difficulties, however, many teachers do use programmed materials to help individualize learning in the classroom. Glaser maintains that:

Present teaching machine devices and programmed texts and kits are undergoing constant improvement, and it is very likely that tomorrow's devices will not look at all like today's . . . the concept of programmed instruction is of primary importance in contrast to its present implementation.²⁰

We recognize the controversy surrounding the use of programmed instruction, yet we recommend that high school teachers be encouraged to try several ways of using programmed materials. Lumsdaine pointed to a most significant characteristic of good programmed materials in a comprehensive review of the status of autoinstructional materials. He stated that:

¹⁷ Robert Glaser, "The Design and Programming of Instruction," *The Schools and the Challenge of Innovation* (New York: McGraw-Hill, Inc., 1959), pp. 166-167.

¹⁸ P. Kenneth Komoski, "Programmed Instruction—a Prologue to What?" *Phi Delta Kappan*, 44:292 (March 1963).

¹⁹ See especially Wilbur Schramm, et al., *Four Case Studies of Programmed Instruction* (New York: Fund for the Advancement of Education, 1964).

²⁰ Glaser, p. 164.

In the opinion of the writer, auto-instructional methods may represent the most important innovation in education since the advent of the textbook. One reason for this opinion is the fact that the development of programmed self-instructional material is closely tied to the use of empirical data obtained from students' responses as a basis for program revision.²¹

The last phrase in Lumsdaine's statement means that when students are having difficulty with a part of a program, the programmers ask, "What is wrong with the material?" not, "What is wrong with the student?" We recommend this procedure to high school teachers for use with other methods also.

Some ways in which high school teachers have successfully used programmed materials to help individualize instruction are discussed below:

Becoming accustomed to using programmed instruction to learn new skills. All predictors indicate a future characterized by continual change and ever-new developments in business, industry, science, technology, education, and all other aspects of society. Workers will need to learn new skills, technicians will need practice on new procedures, scholars will need to acquire new information, and all citizens will need to keep up with new policies affecting the economy, the environment, and the law. The use of well-written, systematically revised, programmed instructional materials will be one very important means of meeting the demands of accelerated change. For that reason, students need to learn how to use programs efficiently and effectively. The study of the principles of programmed learning, the potentials and limitations, and possible careers in programming have become valuable curriculum items in today's modern high school program.

Varying the rate of individual progress. Human variability is an undeniable educational fact, yet in every curriculum there are some common elements of importance to all students. Some of the common content and skills objectives are achieved quickly by some learners, and more slowly by others, perhaps just as capable learners. Use of well-written programmed materials can allow students to progress at differing rates through common materials, when desired. Moreover, the teacher may have a more accurate picture of the individual's progress at any given point, and may be better able to prescribe next steps.

For enrichment. Individualizing instruction requires more than varying the rate of progress through a common sequence. Programmed instruc-

²¹ A. A. Lumsdaine, "Instruments and Media of Instruction," *Handbook of Research on Teaching*, N. L. Gage, ed. (Skokie, Ill.: Rand McNally & Company, 1963), p. 392.

tional materials may be used to provide material that goes beyond course content goals. Programmed instruction can be used as the sole means of instruction for a course not provided in the school's regular curriculum, although this procedure is not recommended except in unusual circumstances. Students pursuing independent study projects may use programmed materials to study for particular segments of a course.

For remedial work. Programmed materials may be used for drill and practice on basic skills development. In this manner, the student can work on material at his own success level, and gradually progress to next higher levels.

Computer-Assisted Instruction

Through the application of computer technology, instruction can now be individualized to a degree hardly believed possible only a few years ago. Stolzow, the director of the Harvard University Computer-Aided Instruction Laboratory, writes that:

Computer-assisted instruction is distinct from media in that it is a potential for making instruction a truly individualized process through the use of a variety of media utilized to support a system of instruction. While programmed instruction and language laboratories, for example, appear to individualize instruction, they only take the first baby step in that direction. . . . Another approach is needed, and with CAI we could be turning a sharp corner.²²

The two major advantages of the computer over programmed instruction are the computer's almost infinite "memory" or information storage capacity, and its flexibility in selecting alternatives based on a learner's response. It is no longer even necessary to program every contingency into the computer; given a generalized rule or theorem, computers can "create" problems for learners tailored to the skill level displayed. Several computer approaches to instruction are in prototype production, and developmental work is progressing. Briefly, the present uses may be summarized as drill and practice, problem-solving, inquiry, and tutorial modes.²³

In actual practice, the use of computer-assisted instruction is limited to a few research and development centers. Stolzow maintains that, "The

²² Lawrence M. Stolzow, "Computer-Assisted Instruction," *The Schools and the Challenge of Innovation* (New York: McGraw-Hill, Inc., 1969), pp. 272-273.

²³ See "Special Report: Computer-Assisted Instruction," in *Nation's Schools*, 82:49-70+ (October 1968), for articles by leaders in the field concerning the present state and future prospects of computer-assisted instruction.

Here we should distinguish between typical classroom observations made by such persons as supervisors, principals, or other teachers, and the research-developed systematic observation techniques made by trained observers. Unstructured supervisory observations may be quite precise in the terms of the observer, but the observer's terms may or may not be understood to mean the same thing by the observed or by other observers. In this chapter, we use the term "systematic observation" to refer to observations made by trained observers using agreed upon procedures to record specified categories of teacher and/or pupil behaviors as they occur in the classroom.

An example of the categories of behavior used by Withall, an early leader in the movement, should suffice to give the reader an idea of the nature of what is to be observed systematically:

1. *Learner-supportive statements* that have the intent of reassuring or commending the pupil
2. *Acceptant and clarifying statements* having an intent to convey to the pupil the feeling that he was understood and help him elucidate his ideas and feelings
3. *Problem-structuring statements or questions* which proffer information or raise questions about the problem in an objective manner with intent to facilitate learner's problem-solving
4. *Neutral statements* which comprise polite formalities, administrative comments, verbatim repetition of something that has already been said, with no intent inferable
5. *Directive or hortative statements* with intent to have pupil follow a recommended course of action
6. *Reproving or deprecating remarks*, intended to deter pupil from continued indulgence in present "unacceptable" behavior
7. *Teacher self-supporting remarks* intended to sustain or justify the teacher's position or course of action*

Observers using this system would classify the teacher's verbal behaviors into the seven categories which Withall saw as measures of "Social-Emotional Climate" in the classroom. If most of the teacher's statements were coded 1, 2, or 3, the climate was said to be "learner-centered." If a majority of the recorded behaviors fell into the 5, 6, or 7 categories, the climate was called "teacher-centered."

While most observation studies have sampled verbal behavior in the classroom, some efforts have been made to record nonverbal behaviors, such as frowns, smiles, eye contact, position of near-far, and so on. Some

* Donald M. Medley and Harold E. Mitzen, "Measuring Classroom Behavior by Systematic Observation," *Handbook of Research on Teaching*, N. L. Gage, ed. (Skokie, Ill.: Rand McNally & Company, 1963), p. 267, citing J. Withall, "Development of a Technique for the Measurement of Socio-emotional Climate in Classrooms," *Journal of Experimental Education*, 17:347-361 (1949).

of the observation systems use sound recorders or video tape recorders and do the coding and analysis later. Many ingenuous paper and pencil instruments have been developed for use in the classroom. While some of the systems are quite complex, a recent trend has produced simple, practical, easy-to-use instruments.

While most of the work with systematic observation of classroom behavior has been research oriented, a recent trend has been to train teachers and student teachers to use the techniques to study and improve instructional practices. In this regard, Brown and Bane reported on their work in training thousands of Florida teachers to use three observation systems. They stated that:

Where the purpose has not been to train researchers, but rather to help teachers with self-improvement, the emphasis on observation per se is being reduced and more attention is being given to the process of creating or "triggering" behaviors found on the various systems. . . . In a sense, various observational systems comprise a bank of behaviors from which teachers may select in an eclectic fashion when formulating their instructional plans and strategies.²⁹

Analysis of the observation instruments of many of the systems would provide the teacher with written descriptions of desirable classroom practices which he may wish to reproduce "on demand." The Ober Reciprocal Category System is reproduced on the following pages to illustrate how teachers are identifying specific instructional behaviors to broaden their repertoire of alternatives.

Let us say that a teacher decides that more Category 16 (student-initiated) behaviors are to be desired. What kinds of teacher behavior are frequently followed by student behaviors in Category 16? The teacher who has had some experience observing with the RCS notices that 16's frequently follows 1's [Teacher warms (informalizes) the climate], and 3's [Teacher amplifies the contributions of another]. The teacher who desires more Category 16 behaviors on the part of the students then plans the kinds of statements or questions seen to "trigger" the concomitant response.

The foregoing discussion may give the impression that experienced teachers will stand before the class and decide at a point in time to use a given category of teacher behavior in order to produce a certain student behavior response. Classroom interaction is rarely, if ever, that simple. In the first place, there is seldom time for the teacher to analyze the situation and decide on the one category he wishes. Second, there is no

²⁹ Bob Burton Brown and Robert King Bane, "Multi-dimensionality: A Technique for Studying the Classroom" (Gainesville, Fla.: Institute for Development of Human Resources, University of Florida, 1970), p. 8. (Mimeo graphed)

The Reciprocal Category System

Category Number Assigned to Party 1 ^a	Description of Verbal Behavior	Category Number Assigned to Party 2 ^b
1	"WARMs" (INFORMALIZES) THE CLIMATE: Tends to open up and/or eliminate the tension of the situation; praises or encourages the action, behavior, comments, ideas, and/or contributions of another; jokes that release tension not at the expense of others; accepts and clarifies the feeling tone of another in a friendly manner (feelings may be positive or negative; predicting or recalling the feelings of another are included)	11
2	ACCEPTS: Accepts the action, behavior, comments, ideas, and/or contributions of another; positive reinforcement of these	12
3	AMPLIFIES THE CONTRIBUTIONS OF ANOTHER: Asks for clarification of, builds on, and/or develops the action, behavior, comments, ideas and/or contributions of another	13
4	ELICITS: Asks a question or requests information about the content subject, or procedure being considered with the intent that another should answer (respond)	14
5	RESPONDS: Gives direct answer or response to questions or requests for information that are initiated by another; includes answers to one's own questions	15
6	INITIATES: Presents facts, information, and/or opinion concerning the content, subject, or procedures being considered that are self-initiated; expresses one's own ideas; lectures (includes rhetorical questions—not intended to be answered)	16
7	DIRECTS: Gives directions, instructions, order, and/or assignments to which another is expected to comply	17
8	CORRECTS: Tells another that his answer or behavior is inappropriate or incorrect	18
9	"Cools" (FORMALIZES) THE CLIMATE: Makes statements intended to modify the behavior of another from an inappropriate to an appropriate pattern; may tend to create a certain amount of tension (that is, bawling out some-	19

one, use of authority in order to gain or maintain control of the situation, rejecting or criticizing the opinion or judgment of another)

- 10 SILENCE OR CONFUSION: Pauses, short periods of silence, and periods of confusion in which communication cannot be understood by the observer 20

* Category numbers assigned to Teacher Talk when used in classroom situation.
† Category numbers assigned to Student Talk when used in classroom situation.¹⁰

guarantee that the students will interpret the teacher behavior in the way the teacher intended it to be interpreted. Third, there is no guarantee that students will respond in the manner predicted, expected, or called for. Instruction is not yet a push-button science. The point is, however, that teachers who have been trained to observe and code various categories of behavior, have been observed to use a wider range of behaviors in their own teaching.

Ober reported two main benefits from feedback gained from systematic observation: first, the teacher becomes more aware of his classroom teaching behavior; and second, it assists him in controlling his classroom teacher behavior in ways that are congruent with what he "knows and/or believes to be effective teaching practice."¹¹

The tremendous amount of activity in the field of systematic observation in the classroom has produced relatively little new knowledge about the relationship between classroom behavior and classroom learning. The promise of this movement is very great, however, both in educational research and in improved instruction.

Discovery, Inquiry, and Problem-Solving

While knowledge acquisition is one essential goal of instruction, good high school teaching has always emphasized the use of knowledge in meaningful problem-solving situations. The recent emphasis on the "heuristics of discovery" and "inquiry techniques" adds the dimension of "ways of knowing" to the dimension of "ways of using." The concept of discovery as an instructional method has the learner engaged in discovering for himself much in the manner of a scientist or a scholar attempting to formulate a generalization to explain particular instances or phenomena. Jerome Bruner, a learning psychologist, has written extensively concern-

¹⁰ Richard L. Ober, "Theory into Practice through Systematic Observation," Florida Educational Research and Development Council Research Bulletin, 4:1 (Spring 1968), p. 33.

¹¹ Ober, p. 9.

The curriculum project materials utilizing specified instructional strategies always provide detailed instructional manuals to accompany class materials. Many times, however, teachers need study and training before using the project materials. Henderson's comment on the role of the teacher in using discovery methods for secondary school mathematics underscores the complex nature of the process:

Characteristic of the heuristic methods is the feedback from the student's behavior to the teacher. The teacher's responses are determined in part by the inferences he draws from the student's behavior, both verbal and nonverbal, which he observes. It is this feedback which so dramatically distinguishes these methods from the tell-and-do methods.³³

Closely related to the discovery method is the approach entitled *inquiry*. The method of inquiry, as the term itself implies, is to inquire, to make inquiries, or to ask questions. As a specific instructional method, however, inquiry is more than the act of asking general questions; it is the act of asking specific kinds of questions designed to elicit particular categories of response. A typical inquiry approach is to present a short demonstration of a process, often on a single-concept-loop film, and then have the learner ask questions which can be answered in the simple affirmative or negative, or the student may be permitted to ask for needed new information. The student discovers through using *inquiry*.

The inquiry method sometimes looks like the old parlor game of Twenty Questions. The aim of the method is to sharpen the learner's ability to ask productive questions; therefore, some of the time in class is spent analyzing transcripts of class sessions. It is not possible in this brief section to teach the use of heuristic methods. We wish to call attention here primarily to the potential of these approaches. Perhaps the greatest potential is that learning in this fashion becomes intrinsically rewarding. Bruner suggests the hypothesis that ". . . to the degree that one is able to approach learning as a task of discovering something rather than learning about it, to that degree there will be a tendency for the child to work with the autonomy of self-reward or, more properly, be rewarded by discovery itself."³⁴

Obviously, only a portion of the curriculum can be approached as a matter of discovery. To ask each learner to rediscover for himself all the principles, generalizations, facts, and concepts built up by previous scholarship is clearly impossible. The NEA Project on Instruction report stated that:

³³ Kenneth B. Henderson, "Research on Teaching Secondary School Mathematics," *Handbook of Research on Teaching*, N. L. Gage, ed. (Skokie, Ill.: Rand McNally & Company, 1963), p. 1014.

³⁴ Bruner, p. 175.

Fortunately, the benefits of learning through discovery can be gained through relatively occasional use of this approach. Discovery situations placed at intervals in the sequence of each subject field can be used to maintain interest and illuminate meaningful presentations of other kinds—information and explanations provided by the teacher, reading materials, or films for example.³⁵

We recommend this balanced approach to curriculum planners and teachers in today's high schools.

One further point of interest to the secondary school teacher is the historical background of the "recent" trend toward the heuristics of discovery. While much of the contemporary interest in discovery stems from the outcomes of a conference of scientists, psychologists, and educators held at Woods Hole, Massachusetts, in 1959, the use of discovery methods is at least as old as Socrates. In a clever article in a national journal, Johnson traces the literature of discovery through the writings of several prominent "educationists" of past decades, including John Dewey, H. C. Morrison, William C. Bagley, and others. A quotation from a 1906 text on teaching mathematics illustrates Johnson's point that discovery teaching is not new:

The heuristic method is dominated by the thought that the general attitude of the pupil is to be that of a discoverer, not that of a passive recipient of knowledge. The pupil is expected in a sense to rediscover the subject, though not without profit from the fact that the race had already discovered it It is the function of the teacher and the text so to present the things to be done, so to propose the problems to be solved that they require real discovery on the part of the pupil; that at the same time the steps are within his power, and that he attains in the end a good view of the whole subject.³⁶

While it can be demonstrated that the concept of discovery in the classroom is not new, it can also be argued that the practice of discovery techniques in high school classrooms is relatively rare. We recommend that every high school teacher familiarize himself with at least one major text in his field emphasizing discovery methods.

The current popularity of discovery, inquiry, and other heuristic approaches in the classroom has somewhat obscured the significance of the problem-solving approach in education. Problem-solving, as we view it, is central to the educational process. Problem-solving is in reality the application of reflective thinking to a situation. Problem-solving requires the

³⁵ NEA Project on Instruction, *Deciding What To Teach* (Washington, D.C.: National Education Association, 1963), p. 40.

³⁶ Mauritz Johnson, "Who Discovered Discovery," *Phi Delta Kappan*, 48:122 (November 1966), citing J. W. A. Young, *The Teaching of Mathematics* (New York: Longmans, Green & Co., Inc., 1906), pp. 69-70.

ability to bring to bear on a "problem" enough relevant information, skills, and procedures to effect a solution.

In one sense, many daily activities in the high school classroom are problem-solving activities. For example, a tenth-grader is dissatisfied with his ability to use the microscope successfully in his biology class. He speaks to his teacher about this, who points out that the pupil is not handling the adjusting mechanism correctly. The student refers to a manual of instructions for microscope use, finds the appropriate section, and practices the recommended techniques. He has now solved his problem.

On a more formal basis, the general sequence of a problem-solving approach can be identified and practiced. When students are aware of a general problem-solving process, there is greater likelihood that the process will be transferred from one learning situation to another. While a problem may be attacked in many different ways, we suggest that any individual using the problem-solving process follows a general sequence including these steps:

1. The learner identifies a problem needing a solution.
2. The learner clarifies the problem, stating it in terms he can handle.
3. The learner analyzes the problem and begins to collect information or other resources relative to the problem.
4. The learner organizes the information into a plan of action.
5. The learner tries out his solution and evaluates the process and the results.

These general steps can be adapted or modified to fit any classroom problem-solving situation. Many writers have provided very helpful information to help teachers use and teach problem-solving techniques.³⁷

The important point to be made here is that learning a problem-solving process is as important as a classroom goal as solving any particular problem. Systematic plans for teaching problem-solving techniques should be included in many units of work throughout the high school curriculum.

³⁷ See Chap. 8, "Problem Solving and Education," in Gail M. Inlow, *The Emergent in Curriculum* (New York: John Wiley & Sons, Inc., 1966), for a discussion of points of view of several writers.

Additional Suggestions for Further Study

1. Adams, Raymond S., and Bruce J. Biddle, *Realities of Teaching: Explorations with Video Tape*. New York: Holt, Rinehart and Winston, Inc., 1970. A report on the use of video tape in the analysis of teacher behavior. Discusses the procedures used in one study and many of the implications from the results.
2. Brown, B. Frank, *Education by Appointment: New Approaches to Independent Study*. West Nyack, N.Y.: Parker Publishing Co., 1968. The section on staff utilization describes the roles of the principal, the "preceptor," and the classroom teacher in an independent study program. Chap. 7 shows how small groups are used to support the individualized activities of independent study.
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4. Kliebard, Herbert M., "The Observation of Classroom Behavior," *The Way Teaching Is* (Report of the Seminar on Teaching). Washington, D.C.: Association for Supervision and Curriculum Development and the Center for the Study of Instruction (NEA), 1966, pp. 45-76. A critical analysis of numerous studies of classroom behavior. Includes brief summaries of the major features of several systems.
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CHAPTER 11

Team Teaching, Cooperative Teaching, and Differentiated Staffing

During the 1950s and 1960s, a multitude of collaborative teaching arrangements began to emerge under the heading of "team teaching." As early as 1962, a survey made by the National Education Association's Project on Instruction indicated a clear trend toward an increase in team teaching. Of the secondary schools in the survey, 5 percent reported using team teaching in 1956, 12 percent in 1961, and 31 percent planned use for 1966.¹ A 1966 survey by the National Education Association Research Division found some form of team teaching in use at the secondary level in 63 percent of the large school systems (over 25,000 pupils) reporting.²

As would be expected in any such rapidly growing innovation, team teaching was characterized by extreme variation in both definition and in practice. The team teaching label was applied to everything from informal, impromptu arrangements between two teachers combining their classes in short-term pursuit of a common theme activity to formalized arrangements with team leaders, master teachers, associate and assistant teachers, and teacher aides, extending over the school year and longer.

A certain amount of flexibility is essential in defining any widespread educational activity, but the acceptance of a loose "anything goes" definition of team teaching can result in ill-conceived, unsound instructional practices in the name of innovation. In 1964, Shaplin expressed the concern that ". . . the immature, nonrational character of much of the literature on team teaching stands in the way of further developments. Team

¹ Project on the Instructional Program of the Public Schools, *The Principals Look at the Schools* (Washington, D.C.: National Education Association, 1962), p. 18.

² "Team Teaching," NEA Research Bulletin, 45:115 (December 1967).

teaching may become so meaningless that it turns into a mere fad, transitory and ephemeral, and the inevitable disenchantment with the fad will mean the destruction of all its real values and future possibilities."³

It is our opinion that the accumulated experience with team-teaching innovations of the past 15 or so years can enable us to establish operational definitions specific enough to exclude general, peripheral, and incidental activities, and still be flexible enough to accommodate differing views about instruction and varying patterns of staff utilization.

In this regard, we find it useful to distinguish among collaborative teaching efforts by classifying them into the broad categories of *team teaching*, *cooperative teaching*, and *differentiated staffing*. Team teaching refers to formalized agreements for sharing instructional responsibilities for a particular group of students. Cooperative teaching refers to those collaborative efforts at the instructional level entered into on an informal basis without formal, long-term commitments. Differentiated staffing is a relatively new term referring to the concept that educational tasks of differing orders of complexity can be performed by personnel with differing levels of training and responsibility. Some team-teaching plans may use a hierarchical and differentiated staffing approach and most differentiated staffing plans utilize team teaching, but the terms are not synonymous. It is possible to have team teaching without formal differentiated staffing, and a differentiated staffing model need not necessarily meet all the criteria for team teaching. We propose to take a closer look at each of these categories of collaborative teaching in succeeding sections of this chapter.

A Closer Look at Team Teaching

We use the term "team teaching" to refer to formalized arrangements in which a minimum of two professional teachers are assigned joint responsibility for planning, conducting, and evaluating a regular portion of the instructional program for a shared group of students. The phrase "formalized arrangements" is central to this definition of team teaching. This means that the team members have a formal commitment to the team plan—not just a "gentlemen's agreement" to work together whenever convenient. Formalized arrangements help guarantee continuity. The administration accepts responsibility for providing replacements to keep the team structure intact when necessary. Membership on the team has official sanction and is recognized as a part of teacher load. Team teaching in formalized arrangements is on a regular, continuing basis, and minimum time duration of the team is specified. Team members are given authority com-

³ Judson T. Shaplin, "Description and Definition of Team Teaching," *Team Teaching*, Judson T. Shaplin and Henry F. Olds, Jr., eds. (New York: Harper & Row, Publishers, 1964), p. 8.

mensurate with team duties and responsibility. For example, if team teaching goals require a different scheduling arrangement, the teaching team must have control over enough of the team schedule to make flexible arrangements for the use of staff and student time. Additionally, in formalized arrangements, there is an obligation to evaluate the team teaching plan on a systematic basis.

Definition and Advantages

The definition we propose for team teaching specifies a membership of at least two professional teachers. Arrangements consisting of one professional teacher and one or more nonprofessional aides or assistants seems to us to fall more appropriately into the category of differentiated staffing. The interplay among professional teachers working together to make joint decisions is an essential element of true team teaching. Ideally, the professional team members will have the services of teacher aides or clerical assistants, at least on a part-time basis. Also, ideally, all components of the act of teaching, that is, advanced planning, implementation of classroom and other learning activities, and evaluation of student progress and instructional procedures, will be carried out *jointly* by members of the teaching team. Many team-teaching plans seem to us to be team-planning plans. There is cooperative planning and cooperative evaluation, but no combined effort teaching. We feel that there is much to be gained when teachers see each other teach; therefore, we add the element of *joint teaching* to our definition of team teaching.

Briefly stated, these are the essential elements of team teaching as we view it:

1. Formalized arrangements (official status, administrative support for continuity, assigned team membership, specified time arrangements, stated aims and objectives)
2. Minimum of two professional teachers, with or without aids
3. Joint planning, teaching and evaluating
4. Built-in systematic evaluation of the team teaching plan

The underlying purpose of any plan of organization for instruction is the most effective instruction of the learners in the instructional group. Proponents of team teaching agree that team teaching is not an end in itself, but a means toward improved teaching-learning conditions. To say this, however, is to say little, until the manner in which team teaching will improve instruction in a particular situation is specified. Most team-teaching plans aim to improve instruction by meeting a number of *secondary* goals assumed to be related to the primary goal of improved instruction. For example, if individualized instruction is a desired end, the team-teaching plan aims to provide increased amounts of individualization. If

instruction given by specialists is deemed to be educationally desirable, the team plan attempts to foster specialization. The rationale here is that there are certain *organizational advantages* in team teaching as compared with regular classroom organizations. Brownell and Taylor presented a set of "common hypothetical advantages" of team teaching. We like their statement, first because it is comprehensive and representative; and, second, because it is tentative rather than dogmatic. The statement of the hypothetical advantages is as follows:

Practical and effective in-service education through frequent team meetings

Marked success in inducting new teachers into school systems as a result of interns as team teachers

The use of aides to release teachers from routine duties

Teacher involvement in planning and developing team curriculum because of team structure

Through selection of team teachers and election of leaders, recognition for outstanding teachers

Because of team structure, the ability of the team to form large and small groups for instruction, from one teacher to one student, to one teacher for 200 students

Because of team structure, the ability to vary the length of instructional period to suit content and interest span

Because of team structure, the ability to group and re-group frequently by achievement or ability levels

At the elementary level, the ability to develop exchange teaching opportunities amongst the team teachers in order to exploit teachers' special talents, knowledge, and training

Improved guidance from the planned exchange of information about students and the intimate atmosphere within the team

Improved correlation of subject matter because of cooperative planning in team meetings

Through team leaders and team meetings identification and use of community resource persons

The planning of field trips for team students in team meetings and less interference of field trips with other teachers' classes

Because of their children's common experiences, increased interest and involvement of parents

Because teams can be kept together for more than one school year, the organization to develop sequences of content and intellectual processes

Improved climate of motivation because of accent upon individual identity and team spirit

Because of team structure, the best use of teacher talent

Because of varied groupings and presentations, greater student interest⁴

⁴ John A. Brownell and Harris A. Taylor, "Theoretical Perspectives for Teaching Teams," *Phi Delta Kappan*, 43:151-152, January, 1962.

Obviously, not all of the above-stated advantages will accrue to every team-teaching plan. Unfortunately, however, it is rather common practice for groups beginning team-teaching projects to offer long lists of supposed advantages as justification for initiating the project. In an excellent book on team teaching, Polos had this to say about the potential of team teaching:

. . . There really is no limit to the possibilities to team teaching, and perhaps this is its greatest advantage. It creates an experimental mood, and teaching becomes a way of manipulating a variety of sources for learning. In short, it does what we all hope sound education should do, and that is encourage the student to assume the responsibility for his own education.⁵

The naive expectation that any of the potential advantages of team teaching will automatically become actual advantages can block the sound, systematic planning required to make possible the realization of many of the potential advantages. As an illustration, take the statement that team teaching will "encourage the student to assume responsibility for his own education." It is altogether possible that any given team-teaching plan could provide such specialized teacher help and such supportive guidance, the students might in fact be encouraged to *rely* heavily on their very competent teachers. Therefore, if a team-teaching project expects student self-responsibility to be a product of the plan, specific procedures for developing self-initiated, self-directed learning will need to be included in the plan.

The same can be said of any other "claimed" advantage for team teaching. For instance, "more regular use of a wider variety of educational media and instructional materials" is frequently listed as potential advantage of team teaching, because it is assumed that resources can be allocated more efficiently to a group of three, four, or five teachers than to each of three, four, or five individuals. This assumption is likely to prove false, however, unless there is a written plan for assigning an inventory of media and materials to a team. Whenever possible, the materials should be housed in close proximity to the teaching team. Additionally, the school library or instructional materials center staff members should be assigned as "affiliate team members" and occasionally should attend team planning sessions. Record keeping procedures should be instituted for documenting the amount of use and the nature of the use of materials.

Each potential advantage of team teaching makes different demands for adjustments and commitments of the school system using the plan, and

⁵ Nicholas C. Polos, *The Dynamics of Team Teaching* (Dubuque, Iowa: William C. Brown Company, Publishers, 1965), p. 87.

persons involved in team-teaching efforts can wisely spend some time thinking together about ways of insuring that the alleged advantages will become actual advantages.

Implementation of team teaching requires decisions to be made concerning leadership patterns, scheduling priorities, limits of authority and responsibility, management of resources, and many other related matters. Controversy can arise as these questions are settled. No "authoritative" best answers are available, but the following discussion may help school staffs resolve these issues:

Hierarchic or Cooperative Leadership?

Basically, the pattern of leadership in team teaching is either hierarchic or cooperative. The hierarchic model has a designated status leader who may receive a salary supplement or equivalent recognition for his administrative and leadership duties. There may be several categories of rank on the team, such as *team leader* or *master teacher*, *senior teacher*, *associate teacher*, *assistant teacher*, *apprentice teacher*, *intern teacher*, and *teacher aide*. The hierarchic team has the definite advantage of fixing responsibility for the administration and evaluation of the team plan. Coordination with other teams and with school administration is facilitated when the locus of control is administratively fixed. A further advantage of the hierarchic plan is that it creates a "career pattern" at the classroom level. A teacher does not have to "move up" out of the classroom to be given recognition and reward for special competencies and for assuming greater responsibilities for leadership. Hierarchic team structure may work well in school districts having a relative balance between experienced and inexperienced teachers, and in school districts with a tradition of recognizing "superior" teaching through "career teacher" salary increments or summer curriculum improvement employment.

One objection to the hierarchic model is that a premium is too often placed on the routine, administrative duties rather than on the instructional functions of the teacher. Also, in some of the early models, the team leader or master teacher was synonymous with "large-group leader" which attributed an unacceptable hierarchy to certain types of teaching.

The cooperative or emerging leadership model of team teaching envisions the team as an association of equals, with each member assuming responsibility for those functions for which he is the most qualified person on the team. This pattern is increasingly known as "synergetic" type teaming. Synergetic is derived from the Greek meaning "work together." In the synergetic model, one team member may serve as chairman or coordinator to see that meetings are scheduled and necessary routines are managed.

The position may be rotating, or a member of the team with an aptitude and a liking for management functions may serve permanently.

Interdisciplinary or Single Subject Teaming

Secondary schools in general have a *school subject* orientation. Though this is often decried, it cannot be denied that secondary schools do have an important responsibility to see that the principles and methods of the major disciplines are available to students. The interdisciplinary team pattern, combining two or more teachers of separate subjects, attempts to promote communication, coordination, and cooperation among subject matter specialists, so that students benefit from instruction planned by specialists, but lacking the fragmentation which characterizes many departmentalized plans. The interdisciplinary team may consist of two or three teachers from closely related areas with the primary goal of correlating learnings from the disciplines. Or the team may consist of four, five, or more teachers from as many separate areas, with the priority goal of coordinating the schedules of students to provide flexibility and individualization of instruction. In spite of obvious potential advantages, interdisciplinary teaming is extremely difficult in practice. Unless the specific objectives are clearly stated, confusion rather than cooperation will be the result. Also, there is the danger in correlated units that one subject will be overemphasized at the expense of another. The synthesis sought among all areas may force an artificial or inappropriate sequence on important principles in a given discipline.

Single-subject teams, on the other hand, do foster *depth* in the individual discipline. Diagnostic tests and individual prescriptions for continuous pupil progress are more feasible. The single-subject team provides an in-service opportunity for less experienced teachers on the team. The obvious disadvantage is the compartmentalization of learning which may easily occur in departmentalized approaches.

Although significant changes in the functions and curricula of secondary schools may result in radically different staffing patterns in the future, it can be anticipated that secondary schools will continue for some time to have the dual responsibility for developing skill in the organized disciplines and for promoting a sense of interrelatedness among them. Every teacher should belong to one group committed to developing depth and breadth in a particular field of scholarly inquiry. Some plan of instruction should also be included for the purpose of going beyond and cutting across discrete subject lines. Some schools may achieve both these ends through the use of single subject teams with coordinated curriculum planning. Others may use interdisciplinary teams, or a combination of both. Whatever the decision, a systematic, cooperative approach is becoming characteristic of secondary school organization.

The Problem of the Anonymous Student

When students move frequently from large- to small-group to individual-study laboratories to materials resources centers, there may be confusion about who has primary responsibility for any given student's program. Also, in some team-teaching plans, teachers have pupils in large-group settings, or they may have rotating groups of students for a few weeks duration in a special phase of instruction. In such a situation, it is easy for students to experience a feeling of anonymity and transience. Also in plans with flexible time arrangements for students, someone must be responsible for the whereabouts of the student at all times, for reasons of safety and legal accountability. Some plan for assigning each student his or her "own" teacher is very important where students have contacts with several teachers. This is not a difficult problem to handle, but a systematic plan should be adopted by the school and made known to all involved.

The Problem of Time for Planning

Effective team-teaching plans require scheduled time for team planning. Additionally, teachers need time for individual planning. Imaginative use of large groups, individual study, teacher aides, and common planning periods for team members can provide the extra planning time needed. Scheduling adequate planning time for team teaching requires close cooperation between the school administration and the teaching team. Many innovative scheduling procedures including small modules, variable length modules, alternate day and week schedules, and the like are being used to break the strangle hold of the traditional six or seven equal length period day. Some school districts are using computers in the scheduling process. Block scheduling of several standard size groups of pupils to a team of teachers for several combined periods offers scheduling flexibility in some schools.

When a teaching team is given scheduling responsibility for a large block of time, instructional objectives determine length of periods rather than administrative bell systems. This kind of scheduling requires great patience and cooperation on the part of all teachers involved.

The Problem of Appropriate Facilities

Some team-teaching plans call for varying sizes of instructional groups and types of instructional activities which may not fit the traditional school plant with its preponderance of standard size classrooms. If renovations or new construction are not possible, the team-teaching plan may need to be modified. Many significant educational goals of team teaching can be reached in standard or traditional type facilities. More important than new

facilities is a new attitude about the use of space. Rearrangement of desks in a standard classroom, occasional use of space in corridors, use of the cafeteria; these are very common partial solutions tried by teachers. Two essential space requirements for most successful team plans are (1) a common team planning area, and (2) easy access to an information-resources center.

The Problem of Teacher Training

Few teachers have had either training or experience in working in team-teaching arrangements. The complex nature of decision-making, human relations, and communications problems have been underestimated in most team plans. Teachers need professional training in small-group dynamics and group instructional strategies. Traditional teacher-training experiences have emphasized the personal autonomy of the classroom teacher in making final instructional decisions for individual students. Needed are more teacher-training programs which include opportunities for analysis, study and practice of principles and techniques of group planning, joint decision-making, and cooperative action. These programs are beginning to appear in increasing numbers.⁶

One promising approach to the problem of team-teacher preparation is a cooperative consortium between teacher-training institutions and school systems using team teaching. Both preservice and in-service training programs can be developed with mutual advantages. Teacher-education students, as a part of their regular instructional program, may be assigned regular periods of time as student assistants to teaching teams. The staff resources of the teacher-training institution can be made available for seminars and practice to analyze and study the new demands made by team teaching.

When teachers are aware of the demands of team teaching, it is very likely that they will be able to meet these demands if they see team teaching as a desirable means of achieving their instructional goals for boys and girls. The varied leadership roles place new demands on the professional skills of teachers. The *team leader* must schedule and direct team-planning sessions, coordinate the work of several professional and nonprofessional staff members, see that materials and resources are available at the proper place and time, and ensure that appropriate evaluative procedures are followed. Sometimes the team leader is responsible for observing teachers and making supervisory judgments. In addition to these or similar duties, the team leader must plan and teach classes.

⁶ For a further discussion of teacher preparation for team teaching see Glen Heathers, "Team Teaching and the Educational Reform Movement," *Team Teaching*, Judson T. Shaplin and Henry F. Olds, Jr., eds. (New York: Harper & Row, Publishers, 1964), pp. 362-367.

The degree of formal team structure may vary from plan to plan, but in any case, there are special demands on team members. If there is a hierarchy of ranks such as senior teacher, associate teacher, assistant teacher, and the like, appropriate duties and relationships must be spelled out. Plans must be written out in detail when they are to be shared with a group. A team member may be asked to serve as a resource for a particular task; on some teams certain members take major responsibility for large-group instruction, and others specialize in small-group work. If the team includes teacher aides, the teacher must develop the new skill of directing the work of such assistants.⁷

Another aspect of team teaching requiring more systematic attention is the administrative function. Teams are often expected to take over routine administrative and management functions traditionally handled by the school administrative staff. Such matters as scheduling student time, requisitioning supplies, coordinating field activities, keeping central records, and the like may become "the team's" responsibilities rather than "the office's" problems.

Additionally, when teams of teachers have responsibility for groups of pupils in plans permitting students wide latitude in choice of time and place to work on study projects, new problems of accountability for student safety may arise. These matters are typically included in the preparation program for administrators but not teachers. In-service study for team teachers should provide for attention to the administrative aspects of team teaching.

Patterns of Team Teaching

The formal team-teaching plans found in high schools across the country may vary greatly in particular details, but they fall into a few basic patterns according to organization. Both the theoretical and operational models of many team-teaching plans have been discussed extensively in the literature and new plans will undoubtedly continue to emerge.⁸ In this section, we present a summary of the distinguishing characteristics of the major patterns of team teaching as we see them affecting high school organization for instruction.

⁷ For a fruitful source of information on planning and conducting preservice and in-service skills development programs, see especially Chaps. 4 and 5 in: Dwight Allen and Kevin Ryan, *Microteaching* (Reading, Mass.: Addison-Wesley Publishing Company, Inc., 1969).

⁸ See the January issues, 1958-1962, and the May 1963 issue of the NASSP Bulletin for reports of the project schools in the National Association of Secondary School Principals' Experimental Study of the Utilization of the Staff in the Secondary School. See also Harold S. Davis, *How to Organize an Effective Team Teaching Program* (Englewood Cliffs, N.J.: Prentice-Hall, 1966), and Carl H. Peterson, *Effective Team Teaching: The Easton Area High School Program* (West Nyack, N.Y.: Parker Publishing Co., 1966).

Pattern A: The single-discipline specialization team. Two or more teachers from a single subject area, with their students, form a team for one or more scheduled classes on a continuing basis. Most formal team plans will include a minimum of three teachers. The maximum size of a team may vary, but few will include more than five full-time professional members.

Team leadership may be designated on a hierarchical basis or may rotate on a chairmanship-type basis. Typically, an active team of three or more professional staff members will have the part-time services of a teacher aide. The teachers have a common planning time daily. Increasingly, student teachers are being included in the team structure as junior but participating members. This is an excellent preservice opportunity for student teachers, and experience has shown that student teachers make valuable contributions to team teaching.

Pattern A permits easy grouping and regrouping of students with different teachers on the team according to special interests and needs. This pattern also allows teachers to specialize in depth in one or more areas within the subject discipline. A simple example of this pattern would be an English team, consisting of three English teachers and 90 or so students. One of the teachers would serve as resource specialist for language study, another would lead in the literature study, and the other teacher would specialize in composition. Each teacher might be primarily responsible for instructing one-third of the student membership, but might work with other students in the team as special needs arose, or as special units of instruction were planned. At times, one teacher might give a presentation in his specialty to the total group with his colleagues assisting in the follow-up. Many variations of this plan exist in practice. The following illustration shows the major features of Pattern A.

Pattern A is a flexible plan and is relatively easy to implement. Teachers can begin by using familiar procedures, and make changes as they become more confident in team-teaching arrangements. This plan does not require special building facilities. Also, since this team is within a single department, administrative matters are more easily manageable.

Pattern B: Variable size instructional group team. Pattern B teams are organized with instructional groups ranging in size from project groups of one to 15 students up to large lecture groups of 60 to 150 or more students. Pattern B teams are commonly known as Trump Plan teams. The Trump Plan of large-group instruction, small-discussion groups, and individual-study projects is discussed in some detail in Chapter 10.

Although there are many variations of the Trump Plan team, they all include large-group, small-group, and independent study. The Trump Plan team may be either single-discipline or interdisciplinary. The student membership may consist of students in the same grade, or it may include

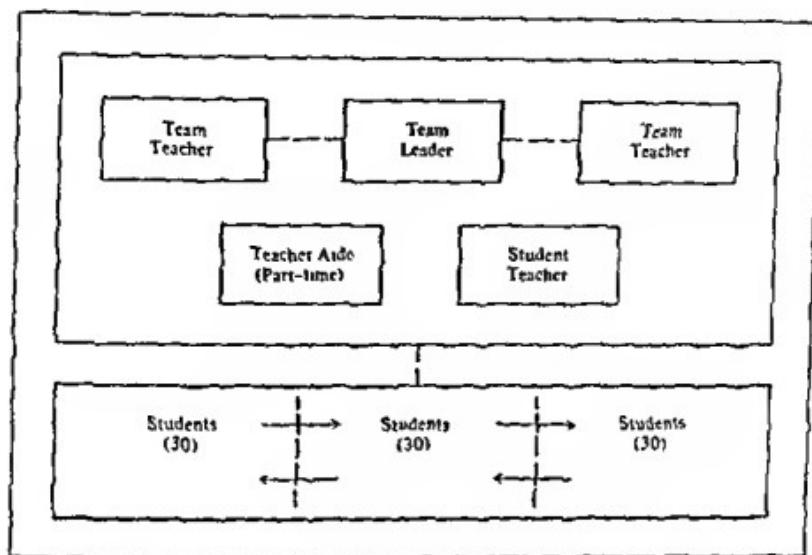


Figure 17. Pattern A: Single-discipline specialization.

students across grade lines. A typical example of a Pattern B team would be a four-member science team with approximately 120 students, one half-time assistant teacher, and a teacher aide. The teacher-lecturer (typically the team leader) gives a presentation-demonstration to the total group of students in the team. After the lecture, 80 students work individually, or in pairs, on an independent study project, with one of the team teachers available as a resource person. The remaining 40 students divide into small groups of 12 to 15 to meet with a teacher-discussion leader for further discussion of concepts introduced in the large-group presentation. The advantages and limitations of variable size group instruction are discussed in Chapter 10. Table 23 summarizes the types of activities and facilities typically associated with team instruction in differing size groups. Figure 18 shows a typical organizational structure of a representative Pattern B team.

Pattern C—The interdisciplinary team. Teachers from separate subject areas are teamed to improve correlation of learnings among the several fields of study. A usual plan is to team English and social studies teachers or mathematics and science teachers to promote better integration of related areas. Another plan teams such basic academic areas as English, mathematics, science, and social studies. This plan is frequently used in the middle school and in junior high school. At the high school level, Pattern C teams are most active on the planning level. Organizational matters, such as flexible scheduling, field trips, shared resources, and the

Table 23. Team Instruction—Representative Activities.

<i>Groups</i>	<i>Representative Activities</i>	<i>Facilities</i>
<i>Large Groups 75-150</i>	Providing background concepts for new unit. Focusing on basic ideas of a unit. Testing, using written instruments. Summarizing	A room (or for specific instances, an outdoor area) of appropriate size, equipped audiovisually, allowing adequate lighting and acoustics.
<i>Small Groups 12-16</i>	A high degree of student involvement in discussion, questioning, problem solving, and analyzing concepts presented in any of the variable size groups.	Small classrooms, or space separated from other facilities, where discussion can occur free from outside interruptions.
<i>Study Groups 1-30</i>	Reading or writing, both teacher-assigned and student-initiated. Viewing films, videotapes. Listening. Reviewing.	Areas especially furnished for individual study with flexibility for some group interchange, equipped for individual and group use of audiovisual equipment.
<i>Laboratory Groups 10-20</i>	Student involvement in activities using materials and equipment.	Special facilities in the appropriate subject matter areas.
<i>Project Groups 1-15</i>	Allowing project work by individuals or groups in areas of specific interest to the students. Usually student-initiated.	Work areas equipped with enough flexibility to allow a variety of activities.

Source: Developed by Milton Diehl, University of Florida, College of Education.

like can be handled efficiently at the team planning level. Cross-departmental units of instruction can be developed, and independent study projects combining elements of several disciplines can be conceptualized. Interdisciplinary teams may use the variable size instructional group of Pattern B. Leadership can be either hierarchic or synergetic.

An interdisciplinary team plan used at the Azusa, California, High School, in the Claremont Team Teaching Program, illustrates the common characteristics of this pattern. The team operation was described in an interim report in these words:

Azusa Team Two teachers in English and world history combined their efforts in teaching the study skills of outlining, summarizing, and note-taking. To promote accuracy and excellence of written work, history essay tests were corrected by the English teacher. The faculty team united in an effort to teach the research paper: The mechanics were taught in English, the topics taken from world history and geometry, and the papers graded in English and history. For their contribution to a unit

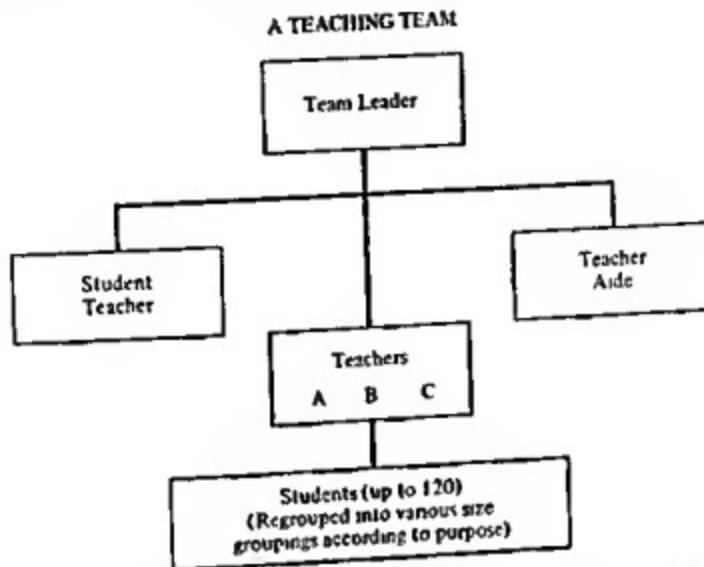


Figure 18. Illustration of typical Pattern B: Team organization.

on the Renaissance, the English and geometry teachers lectured to the team on famous men in their disciplines, and the entire team journeyed to the Renaissance rooms of the Los Angeles County Museum for lectures and observation. While the students were studying *The Iliad* in English, the geometry teacher had them write an essay with the title "The *Iliad* Is of Value to Me," and prove the statement with logical reasoning. When English classes studied the essay, the geometry teacher supplied essays from a mathematical series. Field trips to the production of "Midsummer Night's Dream" and to the Armed Forces Day exhibit at a nearby military installation concluded the team's enrichment program.

The research paper and study skills provided themes for correlation of the work of the English and social studies teachers in Azusa Team Three. Team students in English composed and directed one-act plays; in Spanish and French, they helped in presenting "Carmen" and other dramas. Field trips to the Padua Hills Theater and to the Pasadena Playhouse rounded out attempts to initiate a humanities program for these freshman students. The social studies unit in world geography was expanded to a semester, appropriate materials purchased, and resource persons enlisted. The availability of a language laboratory and an overhead projector enabled the French and Spanish classes to emphasize oral fluency, and algebra classes to center instruction more upon discovery of principle and concepts than was formerly possible.⁸

⁸ John A. Brownell, ed., *Second Annual Report to the Ford Foundation by the Claremont Team Teaching Program for 1960-61* (Claremont, Calif.: Claremont Graduate School, 1962), pp. 14-16.

The Future of Team Teaching

Although rooted in earlier historical antecedents, the team-teaching movement is a contemporary development. The term "team teaching" was not listed in *The Education Index* until 1957-1959 (Volume II). Other cooperative organizational arrangements have appeared briefly on the educational scene only to disappear without leaving a trace. A notable case is the Cooperative Group Plan developed by James F. Hosic in the early 1930s. Shaplin, writing about the antecedents of team teaching, had this to say about the Hosic Plan:

If the Cooperative Group Plan were in existence today, it would be called team teaching; in fact, it would be considered an outstanding plan in terms of its carefully detailed planning and its clear objectives. Curiously, though the plan was adopted for a time in New York City Schools, it appeared to have very little impact on the educational scene. The reasons for this are not clear because of a paucity of published literature, but it is clear that the plan came before its time.¹⁰

The key phrase in the above passage is ". . . that the plan came before its time." Today's team-teaching movement is a part of contemporary society's trend toward ever greater specialization and the consequent need for pooling specialties in a common effort. The exponential increase in new knowledge, the complexity of newer technologies, and the increasing use of teams of experts in all aspects of modern life help establish a climate of readiness for team teaching in secondary schools. In his analysis of antecedents of team teaching, Shaplin writes:

Will team teaching in its various forms follow the fate of past projects which have challenged the traditional organization of the American schools and the teaching profession? Our analysis suggests that the times are different, that the impetus and technology for change along with broad societal participation of both laymen and specialists in other fields has sufficient force and support to bring about lasting innovation. Of itself, as a way of merely organizing teachers to work together, team teaching would perhaps be doomed. But, linked as it is with other major directions of change, team teaching may make a sustained and permanent contribution to the improvement of education.¹¹

We tend to agree with Shaplin's analysis. Team teaching has emerged as a prominent feature in secondary schools. The character of teaching and the role of the teacher are influenced by the team-teaching movement even in those schools without formal team-teaching plans. The image of the teacher as a lone individual making all professional decisions for his class-

¹⁰ Judson T. Shaplin, "Antecedents of Team Teaching," *Team Teaching*, Judson T. Shaplin and Henry F. Olds, Jr., eds. (New York: Harper and Row, 1964), p. 50.

¹¹ Shaplin, pp. 55-56.

room is changing toward an image of a teacher as a professional interacting with other professionals, supported by still other adult helpers. Teachers' daily schedules, instructional materials, and school physical plants are increasingly reflecting a trend toward professional team work. Teacher-preparation programs are slowly recognizing the need for making provisions for developing group dynamics skills, and in-service workshops for this purpose are on the increase. Whatever shape instructional organizational arrangements may take in the future, it appears that professional interaction and cooperation will assume important roles.

A Closer Look at Cooperative Teaching

While the terms cooperative teaching and team teaching are sometimes used interchangeably, we use the term cooperative teaching here in the specific sense of referring to those cooperative arrangements at the instructional level which *do not* include formal, long-term commitments, and which may include cooperation during some phases of the teaching act, such as joint planning, but not other phases, such as shared classroom presentation and interaction with pupils. If a plan calls for team planning but separate teaching, we would use the label cooperative teaching rather than team teaching. If the arrangements were *ad hoc*, entered into casually, and could be terminated at the whim of any team member rather than by prior agreement as to duration, we would still call the arrangement cooperative teaching, although many schools will continue to label such efforts team teaching.

We feel that this is an appropriate distinction for two important reasons. First, the team-teaching concept needs and deserves a more thorough, objective, and scientific evaluation than is possible when the term is used so loosely as to have no specific meaning. Second, the concept of cooperative teaching as a valid and legitimate means of improving instruction needs and deserves recognition and support. This is to say that many cooperative arrangements short of formal team-teaching plans may offer significant benefits, and such arrangements may need the extra planning time and resources not generally provided because they are "just cooperative efforts." Many cooperative teaching arrangements in secondary schools grow out of teachers' efforts to correlate significant learning themes that cut across the separate disciplines. Some cooperative arrangements result from efforts to capitalize on a special interest or talent. Cooperative teaching growing out of the interests and resources of the school staff is a very effective way to make instruction more dynamic. Cooperative teaching can be initiated more readily than more highly structured plans because it makes fewer demands on resources and requires fewer changes in school routines. Some types of successful cooperative teaching plans are suggested on the following pages.

Combining related topics in separate subject areas. Teachers in separate subject areas can capitalize on natural relationships between subjects by developing common reading lists, shared projects and reports, and joint showings of films and the like. A typical example would be an English teacher and a social studies teacher planning the joint study of the literature and life style of a period with historical and political developments of the period. In a study of the American Revolutionary period, students might read earlier and later drafts of the Declaration of Independence and speculate on the political concept of *compromise*. A study of biographies of the framers of the document would lead to an understanding of the nature of *point of view*, *bias*, and *selectivity* as principles of composing. The influence of lives of individuals on a nation's destiny is a discussion topic for both literature and history. Reading assignments, discussion periods, report sessions, role playing, dramatizations, and written reports could be combined and used in both classes. The cooperating teachers may wish to exchange classes or combine classes for occasional sessions. Scheduling such classes at the same or in succeeding periods is a simple expedient to facilitate such flexibility.

Thematic approach combining several areas. Teachers in separate subject areas come together to plan a combined unit based on a theme appearing in different manifestations in each subject. This approach is seen most clearly when art, music, home economics, and industrial arts teachers plan activities in each area around an agreed-upon theme, concept, or organizing center such as design, texture, harmonics, mood, tone, balance, and form. The separate subject approach may be followed in most of the school curriculum, with only occasional cooperative teaching units used to demonstrate the interdisciplinary nature of all of man's endeavors, and to give students practice in synthesizing learnings from separate disciplines. The subject department plan of organization followed by most high schools makes long-term interdisciplinary team teaching difficult. Planned use of the thematic approach to cut across departmental lines may promote the concept of correlation without losing the benefits of discipline specialization during the latter high school years. The *core curriculum* movement of the forties and fifties¹² provided many illustrations of effective interdisciplinary correlation in a single classroom. Cooperative teaching expands the number of people planning together to foster the integration and correlation among disciplines.

¹² For a background on the major features of core programs see Harold B. Alibert and Elsie J. Alibert, *Re-organizing the High School Curriculum*, 3d ed. (New York: Crowell-Collier and Macmillan, Inc., 1962), pp. 204-230.

¹³ William M. Alexander and Emmett L. Williams, "Materials from Project English Centers," *Education News*, 2:13 (March 18, 1968).

Cooperating to capitalize on special resources. Several kinds of cooperative teaching are used to take advantage of the special interests, abilities, or experiences of the teaching staff. For example, teachers who have attended special institutes for advanced study in a curriculum area may share new approaches and techniques with their colleagues by serving as guest lecturers to classes and through joint planning sessions. The re-emergence of short-term or semester courses in high school also promotes cooperative teaching. A slight trend to subdivide an English course into separate components of literature, composition, and language study has been noted.¹³ A high degree of interaction among the teachers is required to avoid the dangers of fragmentation and lack of transfer inherent in separate subject teaching.

Orientation of teachers new to the school, whether experienced or inexperienced, can be facilitated by cooperative pairing of teachers. Inexperienced teachers can be assigned formally, or "adopted" informally, by more experienced teachers.

Advantages of Cooperative Teaching

The above-mentioned cooperative teaching arrangements are merely suggestive of the many types of activities that teachers may use to promote articulation and continuity, and which make scheduling of field trips and visiting speakers less disruptive. The main purpose of including them here is to support a positive attitude toward these kinds of activities. The recent climate of interest in large-scale innovations sometimes gives rise to the attitude that informal, cooperative efforts are somehow less worthy than the more formal, structured efforts. On the contrary, since cooperative teaching usually arises from the needs and interests of the teachers involved, such arrangements may be more instructionally significant and longer-lasting than more highly visible and publicized formal arrangements, especially if the latter are imposed by outside forces.

Differentiated Staffing

The traditional concept of staffing the classrooms is that every teacher does essentially the same thing as every other teacher. An experienced teacher holding an advanced degree may be paid a higher salary than a beginning teacher with a baccalaureate degree, but each is expected to assume full responsibility for the classroom instruction of a group of students. Beginning teachers may be required to serve a probationary period under supervision of experienced teachers, but the classroom duties are not generally different. Beyond a trial or probationary period, teaching assignments are not generally differentiated on such criteria as training, special

interests or achievements, full- or part-time status, and willingness to assume leadership and coordination responsibilities.

The concept of *differentiated staffing* assumes a hierarchy of teaching roles requiring different skills and different levels of responsibility. In a differentiated staffing plan, teachers may be assigned on the basis of particular specialties such as large-group lecturer, small-group leader, laboratory technician, independent study coordinator; or the assignment may be based on a level of responsibility such as team leader, master teacher, associate teacher, assistant teacher, staff teacher, and intern teacher. Of course, many schools have always employed a certain number of teacher specialists such as remedial reading teachers. Differentiated staffing is an expansion of this existing practice to include new professional and sub-professional positions on the school staff.

In conducting a statewide feasibility study of team teaching for the Florida Department of Education, Frinks proposed the following essential elements:

1. *Levels of instructional responsibilities* that would identify and respond to specific performance objectives for instructional personnel (minimum of three levels)
2. *Salary differentials* that are commensurate with levels of instructional and organizational responsibilities
3. *Individualized Instructional programs* that would reflect the needs of individual students
4. *Time flexibility* facilitated by flexible scheduling which will result in better application of instructional alternatives
5. *Instructional support system* which would provide both human (auxiliary) and nonhuman (media and materials) resources
6. *Instructional personnel involvement* in the decision-making process relevant to their instructional responsibilities
7. *Flexible use of physical facilities* which would allow for necessary variations in instructional programs¹⁴

The current interest in differentiated staffing is a direct outgrowth of team-teaching plans which utilize team leaders, master teachers, teacher aides, and other paraprofessional employees. The traditional design of school organization consisting of classrooms of approximately equal size housing 30 pupils and one teacher is changing rapidly. The increased specialization in contemporary society is having an effect on the educational system. Differentiated staffing is an attempt to systematize some of the related developments which have been occurring in education during the last decade and a half.

¹⁴ Marshall Frinks, "A Working Paper to Stimulate Thinking about Differential Staffing," 3d draft (Tallahassee, Fla.: Florida Department of Education, mimeographed, n.d.), p. t.

The National Commission on Teacher Education and Professional Standards has been active in studying the possibilities of a differentiated-staffing concept through its publications and the annual TEPS Conferences.¹⁵ The Florida legislature in 1968 requested the State Department of Education to undertake a feasibility study of several staff organizational programs, including differentiated or flexible staff utilization. The Utah State Department of Education staff has developed the "Utah State Plan" with delineated instructional and support roles with responsibilities of personnel defined. Widely publicized plans are in operation in a few public school systems.¹⁶ These activities do not add up to a major trend. It is reasonable to predict, however, that coupled with other movements in contemporary society and education, the concept of differentiated staffing will receive increasing attention in the future.

Differentiated-staffing plans have attracted passionate advocates and stubborn resisters. It is too early for the teaching profession to make a judgment about the possibilities of differentiated staffing to improve teaching and learning opportunities in the schools. Below, we discuss some of the possibilities and problems, and present representative models of emerging differentiated-staffing plans.

Potential Advantages of Differentiated Staffing

Differentiated staffing is an attempt to solve some of the persistent problems of education. While advocates of differentiated staffing caution against expecting a panacea, they point to several potential advantages. Bhaerman, Director of Research for the American Federation of Teachers, reported the following claimed advantages to be found in the literature:

1. Various routes and entry points to a teaching career
2. A more open system in that many more adults in our population could play a role in the education of young people.
3. A wider variety of "time tables" for teacher progression. Movement upward is individualized.
4. Teacher roles separated. Teachers would not do the same thing. Assignment would be based upon the variety of teacher interests, skills, and abilities.
5. A structured incentive system that rewards teaching. Some teachers would earn what administrators earn. Encourages younger talents.

¹⁵ See especially the following pamphlets available from the National Commission on Teacher Education and Professional Standards, NEA, Washington, D.C.: *Remaking the World of the Career Teacher* (1966), and *The Teacher and His Staff: Differentiating Teaching Roles* (1969).

¹⁶ Brief descriptions of representative plans in operation in California, Missouri and Oregon are included in *Staff Selection, Education, and Utilization* (Gainesville, Fla.: Florida Educational Research and Development Council, 1970).

6. Adherence to individual differences in teaching styles, rates of growth, and performance.

7. Key assumption: that good teachers can perform at a high level regardless of class size. It is argued that parents would rather have children in large classes with an outstanding teacher even part of the time than in small classes with a marginally competent teacher. The outstanding teacher would be responsible for the education of more students.¹⁷

Freeing the professional teacher from routine housekeeping tasks in order that he may concentrate on guiding learning activities of students has been one of the reasons behind the use of paraprofessionals in high school. The differentiated-staffing movement goes beyond providing assistance for teachers—it differentiates among teachers on the basis of performance and position in a hierarchy. Such differentiation may be an opportunity for increased professionalism, or it may be an opening for bureaucratic stagnation. The differentiated-staffing concept is extremely complex. What is involved is nothing less than a redefinition of the role of teaching. Every professional teacher is obliged to keep informed about the issues and developments in this period of experimentation and change.

Potential Problems of Differentiated Staffing

As we analyze the emerging literature of differentiated staffing, we see several common issues of special significance for teachers. Some of the problems which should be anticipated are discussed below.

Teacher-pupil ratio. Some differentiated-staff plans decrease the number of certified personnel on a school staff in order to afford a larger number of total staff members. The proposed Utah plan for differentiated staffing illustrates this point. Under the heading of *Staff Structure*, the proposal states:

The proposed new system will employ fewer professional teachers. The teacher-pupil ratio will be increased to possibly 45 to 50 students to one teacher. The staff salary monies will be redeployed to add the needed technicians, clerks, assistants, tutors, and aides that will comprise the staff structure of the new instructional system.¹⁸ The basic alternatives are (1) higher paid, skilled professional teachers, augmented by other staff services, and a larger number of pupils, or (2) the usual teacher-pupil ratio without the extra services and increased compensation. The final answer must be based on evidence of student growth and at this time, the evidence is not in. It is important, however, that differentiated staffing

¹⁷ Robert D. Bhaerman, compiler, *A Study Outline on Differentiated Staffing*. QUEST Report No. 2. (Washington, D.C.: American Federation of Teachers, circa 1969). pp. 3-4.

¹⁸ *A Proposed Framework for Developing a New Instructional System* (Utah State Department of Education, mimeographed, n.d.), p. 11.

prove itself as an aid to improving the quality of education, and not just as a more economical model of staffing the schools.

Assignment of duties to noncertified personnel. Distinguishing among the many instructional tasks those which are clearly professional duties and those which may be performed by subprofessionals is a complex task. Attempts to develop written job descriptions have been less than satisfactory. We suggest that two important guiding principles be followed in determining appropriate assignment of duties. First, a certified professional teacher should direct, evaluate and be responsible for the work of non-certified personnel. Second, all instructional decisions should be made by professional teachers. Obviously, all staff members and students affected by a decision should be involved in discussion leading to a decision, but the professional teachers must have final decision-making responsibility.

Teacher morale. Any staffing plan that reduces the professional teacher's sense of involvement and responsibility poses serious potential hazards. In any hierarchical ranking, the importance of rank should be minimized and the significance of performance maximized. Additionally, teachers should be involved in the planning of any program.

In-service training. If the differentiated-staffing concept progresses toward increased specialization of function, in-service time and resources must be provided to prepare teachers for new roles. Also, ways of working with supplementary personnel, sharing responsibility for evaluation, joint decision-making, and other requisite skills must be added to preservice teacher education programs.

Other issues and potential problem areas concern such matters as public acceptance, legal authority, certification questions, and other administrative and organizational procedures. For a summary of the impact of a pioneer differentiated-staffing project on the classroom teacher, the interim evaluation report of the Oak Avenue Intermediate School in Temple City, California, is instructive. The overall evaluation by faculty and students was favorable in terms of "individualism of instruction, open-climate and collegial atmosphere, teacher participation in decision-making, pupil and teacher enthusiasm for school, and teacher satisfaction with the program."¹⁹ The following problems were also noted:

Teacher fatigue

Trend toward faculty separation

Trend toward a new elite in decision-making

Conflict due to role ambiguity

¹⁹ Fenwick English, *An Interim Evaluation of Oak Avenue Intermediate School Differentiated Staffing and Flexible Scheduling* (Temple City, California Board of Education, mimeographed, December 1968), p. 2.

Incomplete library-media center

Student reluctance to assume responsibility for learning.²⁰

Undoubtedly, both successes and failures with this innovation will be reported. The important point for teachers from the above evaluation is that the evaluation identified the emerging problems. The staff was then able to recommend ways of overcoming the problem or proposing alternative staffing arrangements. We feel that this is a valid way to test out innovations in the high school.

Typical Patterns of Differentiated Staffing

The differentiated-staffing movement is still young and is assuming many forms. It is possible, however, to discern common features shared by most of the plans. A typical differentiated plan consists of a minimum of three and a maximum of five levels of classroom personnel. All of the plans include use of both professional and paraprofessional personnel. Most of the plans have some form of team organization, and all of the plans are based on a differentiated salary schedule. The diagram in Figure 19 illustrates the major features of a typical differentiated-staffing plan.

We feel that the concept of differentiated staffing can be used to solve some of the persistent problems of education. We feel that a career pattern which allows competent professionals to retain classroom instructional roles is worthy of attention and study, and we predict that varying forms of differentiated staffing will become established practice in many high schools in the 1970s.

Implications for Beginning Teachers

The team-teaching and differentiated-staffing developments discussed in this chapter are bringing about a new conceptualization of the role of high school teacher. No longer is it sufficient for the prospective teacher merely to be knowledgeable in his subject areas and skilled in instructional procedures; he must also possess new skills and techniques for working with professional and paraprofessional staff colleagues. As the professionalization of teaching increases, the preparation programs, certification requirements, employment and assignment practices, and salaries and promotion policies can be expected to change. The picture of the high school teacher as an isolated professional in his classroom with his students is already changing. The high school teacher of the future will have shared responsibility with other professionals for making instructional decisions for individual students. At times, the high school teacher will be in a subordinate status, following instructions of a more experienced, more highly trained professional specialist. At other times, the teacher will have the

²⁰ English, pp. 3-5.

		NON TENURE	
TENURE		NON TENURE	NON TENURE
TENURE	Staff Teacher (B.A. and Teaching Credential)	Senior Teacher (M.S. or Equivalent)	Master Teacher (Doctorate or Equivalent)
Associate Teacher (A.B. or Intern)			
100% teaching	100% teaching responsibilities	3/5's staff teaching responsibilities	2/5's staff teaching responsibilities
	10 months	10-11 months	12 months
Academic Assistants A.A. Degree or Equivalent			
Educational Technicians			
Clerks			

Figure 19. A model of differentiated staffing. (After Fenwick English, Differentiated Staffing, Florida Department of Education, mimeographed, September 1968.)

responsibility for directing the work of other professionals, as well as supervising the work of teacher aides, clerical aides, technical aides, volunteer workers, and other personnel. An important implication of these changes is that prospective teachers should seek out opportunities to gain experience working with team-teaching programs during the undergraduate teacher preparation program whenever possible. Initial employment in a differentiated-staffing plan also offers excellent in-service training opportunities.

An important point for prospective teachers to consider is that teachers in school systems utilizing differentiated-staffing patterns frequently expect that all teachers will periodically participate in in-service training programs or other continuing professional education opportunities. These training experiences are frequently scheduled after school, in the evening, or on Saturdays. If the prospective teacher is not willing to invest these extra hours in professional study and develop, he would be wise to consider a less demanding position than that of a professional high school teacher.

Additional Suggestions for Further Study

1. Allen, Dwight, et al., "Preparation and Utilization of Paraprofessionals in Schools," *Reality and Relevance*, 1969 Yearbook of the American Association of Colleges for Teacher Education. Washington, D.C.: AACTE, 1969, pp. 113-128. An address by Dwight Allen and the responses from five panel members stressing the rationale for differentiating the roles of the staff in education and, specifically, the contributions paraprofessionals can make. Allen stresses a variety of means for the training of professionals and paraprofessionals.
2. Anderson, Robert H., *Teaching in a World of Change*. New York: Harcourt, Brace & World, Inc., 1966. A view of team teaching beginning with the antecedents of the current movement and concluding with a summary of many of the advantages of team teaching. The chapter that discusses the use of paraprofessionals does so in the context of a broader view of all the people who work with teachers.
3. Bhaerman, Robert D., "Education's New Dualisms," *Quest Paper on Paraprofessionals and Professionalism* (No. 8). Washington, D.C.: American Federation of Teachers, c.1969. A brief, but informative paper that presents the functions of the paraprofessional as they relate to the instructional program, thus viewing the paraprofessional as more than just a clerical aide.
4. Chamberlin, Leslie J., *Team Teaching: Organization and Administration*. Columbus, Ohio: Charles E. Merrill Books, Inc., 1969. A "beginner's" view of the establishment and operation of a team-teaching program. Frequent use of "breves," concise illustrations of the major concepts, aid the reader in understanding this topic.
5. Cunningham, Myron, *Project Ideals: Staff Selection, Education and Utilization*. Gainesville, Fla.: Florida Educational Research and Development Council, 1970. A thorough summary of information on differentiated staffing, use of paraprofessionals, and team teaching. Reviews the literature in these areas.
6. Franklin, Marian Pope, ed., *School Organization: Theory and Practice*. Skokie, Ill.: Rand McNally & Company, 1967. Chapters eight and ten consist of readings in the areas of the theory of team teaching and the existing team-teaching practices at the secondary school level. The article by Harold Davis, "Planning for Team Teaching," is especially helpful.
7. Hunt, Paul, ed., *Trout Letters*. Chicago, Ill.: Science Research Associates, Inc. A series of biweekly letters published from October 9, 1967, through July 1, 1968, covering a broad range of topics exploring the team-teaching concept. See also issue #15 of SRA's *Baden and Maurer Letters*, concerned with the use of Auxiliary Personnel.
8. "Micro Team Teaching." (Final report on research on a simulated team-teaching program.) LaCrosse, Wisc.: Wisconsin State University. (Mimeo-graphed) A report on a 1967-1968 project to provide preservice teachers with experience working in team-teaching situations. Although this particular project pertained to an elementary school setting, the program described could be used at the secondary level.

9. *Team Teaching: Weber School District.* Papers published by the Weber School District, Ogden, Utah, beginning in 1966. Topics include reports on team teaching, in general, and on the experiences of this school system with team teaching. An example of the latter is a description of ways their teams arrange for the use of the resource center by the students (see Volume I, No. 8).
10. Vars, Gordon F., ed., *Common Learnings: Core and Interdisciplinary Team Approaches.* Scranton, Pa.: International Textbook Company, 1969. H. Edgar Pray's paper, "Interdisciplinary Team Teaching," relates the author's experiences with a team approach at a junior high school. Included are descriptions of team activities and teacher-pupil activities that were facilitated by the use of the interdisciplinary team. Also described in this text are several other team approaches designed for use with core programs or to replace core programs in secondary schools.
11. Wright, Betty Atwell, *Teacher Aides to the Rescue.* New York: The John Day Company, Inc., 1969. Includes extensive suggestions on the possible roles of paraprofessionals. Uses case studies and job descriptions for illustrative purposes.

PART **IV**

**THE HIGH SCHOOL
OF TOMORROW**

CHAPTER 12

The High School of Tomorrow

Throughout this book the authors have stated or implied many assumptions about the high school of tomorrow—its students, program, staff, and related matters. Frequently we have described present situations and indicated how these might be modified in the future. In this final chapter we will pull together the earlier predictions, speculations, and proposals on individual items for the future and add others to present our ideas and hopes for the high school of tomorrow. "Tomorrow" to us is so near that we can see something of its shape but far enough away to permit essential change to occur. Already many high schools have some of the characteristics we are about to describe, but at least a decade may be required for most schools to take on these and the other features that further social and educational change may necessitate. Probably we are writing about schools that will come into being as models in the 1970s and become more widespread in the 1980s.

Bases for Planning Tomorrow's High School

Our ideas about the future are heavily influenced by available data, much of it presented in earlier chapters, regarding changes occurring or anticipated in our society, in the student population, and in the educational process. There follows a brief recapitulation of the implications we draw from these data as bases for planning the high school of tomorrow.

Social Change and the High School of Tomorrow

Chapter 2 presented data regarding "The Social Setting for the High School of Tomorrow" in relation to the following major areas:

1. The rapidly increasing population of the United States and the world

2. Urbanization and metropolitanism
3. The impact of technology on society
4. Biomedics, genetic alterations, and genetic counseling
5. Pollution and control of man's environment
6. Moral pluralism and shifts in the American ethos
7. Shifts in occupational patterns
8. The rise of big government

The data available regarding what is and what is anticipated in these areas suggest to us the following implications for the high school of tomorrow:

1. The curriculum should include the systematic study of knowledge related to these areas and of the issues to be resolved about them.
2. Increases in the population coupled with probable increase in the amount of schooling per individual and in the cost of better education will require sharply increased financial support of education—the high school will be more expensive and will have to account more carefully for its costs.
3. Population increases coupled with changes in work and income needs of the working-age population indicate the necessity of better guidance and preparation for work at various educational levels, including the high school.
4. The high school program should include appropriate analysis of the social changes and problems created by further population growth; and as a population center itself the school should facilitate and demonstrate effective techniques of cooperative living and learning in an "anthill" type of population arrangement.
5. The urban high school should lessen rather than deepen the social gap between the inner city and suburban societies.
6. The high school should utilize educational technology to facilitate the teacher's concentration on work with individual pupils.
7. The high school program should emphasize the development of social values that enable men to use their technological and scientific knowledge for humane purposes.
8. Occupational trends and career opportunities which exist or may come to exist in relationship to social change in these areas should be included in the high school curriculum.
9. Family life education should have high priority in the high school curriculum.
10. The high school should help students to set and maintain standards for individual behavior that recognize the rights of other persons.
11. The government of the individual high school should involve the students and their parents and lay people from within the community served; the limitations of this school government in relation to external controls should be clearly defined.
12. High school organization should facilitate student participation in community activities related to educational goals.
13. The high school program should provide balanced attention to the objectives of education for citizenship, for personal development, for continued learning, and for work, for all students.

The Student Population and the High School of Tomorrow

Chapter 3 presented data about "Characteristics of the Youth To Be Educated" which serve as sources of several generalizations relevant to planning the high school of tomorrow. Some implications of the data about the student populations which we consider as essential to planning follow:

1. Relatively stable high school enrollments from 1970 to 1985, with greater increases probable thereafter, should facilitate school experimentation during this period.
2. Each high school should carry on continuing studies of its dropouts and graduates and utilize the data from these studies to bring about changes indicated as needed.
3. The high school must provide equal educational opportunity for all; this requires special provisions for the students who have in the past been disadvantaged.
4. The existence of so many rebellious, militant, alienated, and/or delinquent youth in present high schools suggests the need for continuing study of the causes of their attitudes, and also the need for continuing efforts to adjust the high school program to meet better the needs of these students.
5. The high school needs as precise data as can be made available regarding the capabilities and potentialities of each student, along with staff competent to utilize these data and program alternatives appropriate to the range of individual needs of the student population.
6. The high school program should be planned in relation to programs that precede and follow; increasing numbers of students will enter the high school at grade 9 following completion of an early elementary level (to about age 10) and a middle level (to about age 14), and increasing numbers of high school graduates will enter community junior colleges or technical institutes either upon graduation or at some future time.

The Educational Process and the High School of Tomorrow

Developing theories and research, and emerging practices of curriculum and instruction presented in Parts II and III of this book constitute our bases for implying many aspects of the high school of tomorrow. Some of these implications basic to the descriptions and proposals which follow are these:

1. The high school program would constitute the upper part of a curriculum continuum such as described by Shane as "an unbroken flow of experiences planned with and for the individual learner throughout his contacts with the school."¹ Shane illustrates his concept of such a continuum by pointing out that in schools having it:

¹ Harold G. Shane, "A Curriculum Continuum: Possible Trends in the 1970's," *Phi Delta Kappan*, 51:390 (March 1970).

1. There would be no failure or double promotion.
2. "Special education" and "remedial work" would cease to exist.
3. Annual promotion would become a thing of the past.
4. There would be no dropouts.
5. Compensatory education would terminate.
6. Report cards and marks would vanish.²
2. Instruction should emphasize the processes and skills of learning and problem solving as distinguished from the storage of information.
3. The educational process should make optimum use of the resources of the school staff and facility, the community, and the available technology of education.
4. Instruction must include the diagnosis of where the student is as instruction begins and proceeds.
5. Instruction should be characterized by such major features as use of a variety of instructional materials and strategies; focus on the individual learner's progress; reference to established learning principles; and flexible grouping and scheduling procedures.
6. The educational process should be regarded by all concerned as potentially powerful, and planned and executed carefully.
7. The learner should be as fully involved as possible in defining his learning objectives, choosing and directing his curriculum and instructional options, and evaluating his progress.
8. The learner's positive feelings toward himself and his school should be sought for their significant influence on his learning; Fleming's report of his recorded interviews with high school students suggests important criteria for planning the high school of tomorrow:

We want to be respected. "Too often our teachers treat us like dirt. They laugh at us, they ignore us, they do not recognize that we too have opinions."

We want to be involved. "School is so dull and we never do anything except follow directions and do our assignments. We have no opportunity in most classes to work except to listen to the teacher, to do our assignments, and to prepare for tests. We would like to do special studies, do some research, make things, and have more responsibility."

We want to learn something that is important. "Why do they spend so much time on stupid things? Why do they think that getting ready for college is so important? How will we ever use the 'stuff' they teach us? Why do we have to learn the same thing?"³

² Shane, p. 391.

³ Robert S. Fleming, "Needed: Greater Student Involvement," Chap. 10 in William M. Alexander, ed., *The High School of the Future: A Memorial to Kimball Wiles* (Columbus, Ohio: Charles E. Merrill Books, Inc., 1969), pp. 131-132.

The Educational Program

We cannot improve on certain perennial long-range goals of the high school: personal development, citizenship, continued learning, and economic competence. To us these broad goals will be as important and all-inclusive in the future as they have been in the past; the differences, very marked ones, are in the curriculum opportunities and instructional strategies to be related to each goal. Thus we see the high school's program of tomorrow organized around four goal categories; we turn now to our conception of the opportunities tomorrow's high school will provide toward each of these four goals.

'Education for Personal Development'

The high school cannot plan and carry out a significant and challenging program for *each* adolescent without adequate knowledge of his potentialities and capabilities. To obtain such knowledge, educators need much more definitive methods of ascertaining and analyzing human potentialities. This will require more sophisticated and comprehensive sets of test and measurement instruments than now exist and a great body of profound and reliable research on the characteristics of human beings, generalized as appropriate for the populations. There also must be data available about each individual student. Undoubtedly the high school of the future will need a staff of specialists who can work with and assist teachers in studying the potentialities and capabilities of each student. We are not assuming here that talents and capabilities are rigidly fixed through heredity factors, nor that teachers should authoritatively impose on boys and girls rigid patterns of education in light of such analyses. Rather the teacher should truly be a guide and advisor who assists adolescents in understanding themselves and becoming fully self-actualized persons.

Educators for decades have been proclaiming loudly and repeatedly that the program of the schools must be individualized and that the school must take account of the needs educationally, socially, emotionally, and physically of each student and provide programs that will meet his needs. The high school has fallen far short of fulfilling this basic function. In reality, individual development is a myth and a canard that is lost in a mass of regulations, policies, and practices designed to force conformity and uniformity in the educational program. Here and there some secondary schools have done a much better job than the great majority in fostering individual development, and some of the innovative practices introduced into schools in recent years encourage and facilitate at least some degree of individualization of the instructional program. Yet these efforts fall far short of what must be done if the American people really believe in the perfectibility of man and in the surpassing worth of every human being.

Much of the student activism, unrest, or rebelliousness prevalent in the secondary schools in recent years is the product of this serious failure to really develop programs geared to the growth and developmental needs of young people of the community. Whatever one's views may be on the validity and appropriateness of student activism, it must be recognized that something is wrong and that many pupils today are not satisfied with their program of secondary education. Many educators have demanded "relevancy" in the secondary school program. But it should be obvious to any thoughtful student of the subject that relevance is and must be a private matter, an individual thing that stems from each person's own interests, needs, concerns, capabilities, aspirations, and talents. Relevancy indeed requires individualization of the program of the school, and the curriculum will not be made relevant simply by introducing a new unit on sex education in a biology or social problems course, or by playing folk music records and tapes in a general music class in the ninth grade. Edgar Z. Friedenberg, himself a professional educator but one of the most caustic critics of present secondary education, in a review of books and films about the schools, made this observation: "Life in a superior, middle-class high school . . . is a continuous banal, shabby, manipulative and utterly dishonest environment in which both scholarship and personal relations are so deeply falsified and vulgarized . . . that those who succeed are as profoundly violated as those who fail."⁴

Directors of individual personal development. The program of tomorrow's high school for individual development will require a corps of staff people who serve as directors of individual personal development. Each of these directors would have a relatively small number of students for his major responsibility—the number to be set in terms of the availability of qualified personnel and budget support. Probably twenty to thirty would be an optimum number. This person would have major responsibility for planning and guiding the school's contribution to the total development of each of his students. Obviously, he would have to have an unusual set of qualifications to serve competently in this capacity, for we envision a person who would have a high level of capacity to work humanely in every respect with his students and who would also have the vision and imagination necessary to direct the complete development of each of these students insofar as he could through the program of the school. The school would need to have a highly competent staff of psychologists (specially competent to analyze the talents, potentialities, and capabilities of young adolescents), psychiatrists, medical doctors, and coordinators

⁴ Edgar Z. Friedenberg, "What Are Our Schools Trying to Do?", *The New York Times Book Review, Special Education Supplement*, 118 No. 40, 774:56 (September 14, 1969).

of community activities and of media centers. Working with these staff persons and drawing on whatever knowledge he could obtain through visitations to the home and neighborhood of the student (and in some instances he might need assistance from visiting teacher personnel on the staff), the director of individual personal development would be responsible individually for the total schooling of each of his students. He would advise them and work with them on appropriate courses to select from the school offerings, counsel and advise with them on career plans, work with them intensively on an individual basis in the area of values, attitudes, modes of behavior, ethical conduct, and the like, and help them with all sorts of personal problems not only growing out of their life in the school but in the home and in the community at large. As we shall describe later, he will have highly significant responsibilities for helping his students in the areas of continued learning, citizenship activities, and work experience. In general, the director would do whatever seemed useful and helpful in helping each person become truly the most humane, and most self-actualized person he is capable of becoming.

The director would also work with his group of students (we avoid here assiduously the use of "advisees," for something much different than what that term has connoted in the past is intended in this relationship between teacher and the pupil) in the seminars discussed below.

Common areas of study. The program of common studies, often called general education, comprises the major areas of the curriculum in which all students would be enrolled in a rather broad area of course work and activities. This part of the instructional program of the schools is designed primarily to achieve the aims and objectives formulated for those life activities not included in the three other program areas (citizenship, continued learning, and economic competence) discussed later in this chapter. The director of personal development would guide his students into these three program areas, as well as into any other offerings available in the areas of science and mathematics, humanities, family life, mental and physical health, and aesthetics. Class work in these areas of the instructional program should undergo significant and major reform from what is typically taught in courses in these subject fields in the high school. The general approach should be one of inquiry, investigation, independent study, research, and genuine experimental work in laboratories.⁶

The entire program of the school for education in these common areas would not be confined to courses taught in classroom situations;

⁶ See for suggestions as to the program in these fields, Ryland W. Crary, *Humanizing the School: Curriculum Development and Theory* (New York: Alfred A. Knopf, 1969), Chaps. 8, 9, and 10; and Ralph W. Tyler, "Purpose, Scope and Organization of Education," in *Designing Education for the Future, No. 2: Implications for Education of Prospective Changes in Society* (New York: Citation Press, 1967), pp. 34-46.

there would be a rather extensive program of what we generally label as school activities including such traditional things as clubs, service groups, sports and recreational activities and the like, and also some new approaches or activities, such as making motion pictures and video tapes that constitute on one hand simply creative endeavors and on the other that explore and deal with problems and issues of current significance to the student, and similarly, the writing and production of plays and dramatic episodes of various kinds.

Student seminars. Each director of individual personal development would be in charge of tutorial seminars for his group of students. He should be able to call on members of the staff and appropriate people in the community on occasion, but most of the work of the seminar would be a product of group activity under his leadership. These seminars would constitute efforts to deal with meaningful and significant problems, concerns, and needs of the students. In the early years of the high school considerable time would probably be devoted to the common problems of personal growth and development such as boy-girl relationships, ethical behavior, parent-child relationships, recreational activities, the meaning and purpose of life itself, knowing and understanding people as individuals, the essence of humane relationships among people, and similar problems. The groups may also wish to bring into their discussion social and economic problems arising in the citizenship and economic components of their curriculum. The important point is that the seminar will be a place where students would have the opportunity to work together on matters of mutual interest and concern without regard to particular subject matter categories. The development of values and problem-solving abilities is seen as the central purpose.

It should be emphasized again that the person who is director of personal development would be in charge of the tutorial seminar for his group of students. Some aspects of the counseling function also could be served through these group seminar meetings, but the seminars should not become a mere vehicle for advisement, counseling on career plans, and similar matters that should generally be handled on a person-to-person basis. The seminars throughout the high school career of the student should be a vehicle for exciting and penetrating study of significant problems, issues, trends, and developments in the adolescent society and in the total society of which he soon is to become a full member.

Home and family living. A critical area of personal development is that of the understandings needed by the adolescent of his potentialities and responsibilities as a partner in home and family living. Inevitably this education must deal with sex education, and we cite here the resolution proposed at the 1970 convention of the National Education Association as a sensible point of view regarding this controversial area:

The National Education Association believes that sex education which provides children and youth with information appropriate to their age is basic to healthy, well adjusted mental attitudes. It also believes that the public school must assume an increasingly important role in providing this instruction and that teachers must be qualified to teach in this area.

The Association urges that courses in sex education be developed with care and that classroom teachers who teach the courses be legally protected from irresponsible censorship.

The Association calls upon individual teachers and local associations to cooperate with school administrators and school boards in establishing sex education programs as an integral part of the school curriculum and to work with parents to maintain harmonious school-community relations.⁶

Obviously most sex education must be accomplished before full adolescence, although the seminars just described may continue planned discussions of such related problems as marriage and divorce, home planning and maintenance, family and child care, consumer economics, and related topics. Some of these topics as social problems will also be dealt with in the social studies core (see "Education for Citizenship" below), but intensive how-to-do-it training in home planning and maintenance, child care, and consumer problems will continue to be provided in homemaking laboratories, hopefully for all students as their needs and backgrounds indicate.

Mental and physical health and recreation. A significant aspect of personal development is that of developing the knowledge, interests, and skills needed for maintaining good mental and physical health. To this end, such provisions as the following will be essential in tomorrow's high school:

An adequate program of physical education designed to help each adolescent attain physical fitness

Basic health education to help each adolescent understand essential concepts of mental and physical health, and to protect and improve his care of his own health

Personal safety education including such understanding and skills as needed in tomorrow's world for use of automobiles and other transportation means

Varied opportunities for developing leisure time interests and practices that can carry over into out-of-school activities

Havighurst's view of "High Schools for the Future" gives major priority to education for leisure. Predicting that "the decade of the 1970s will come to stand for the strengthening of the expressive aspects of the

⁶ "Family Life and Sex Education," *NEA Reporter*, 9:7 (April 17, 1970).

high school curriculum," he suggested greater use of the outdoors, public television, and the performing arts for development of leisure time interests. His statement of the functions of leisure in a crowded urban society is accepted by us as underlining the necessity of leisure time education as an aspect of mental and physical health development:

To give isolation, at times, amid the shoving and sprinting and raucous activities of the city

To reduce nervous tensions, through an effective combination of physical with mental activity

To provide a setting for the experience of awe and reverence for things that are not man-made.⁷

Development of specialized interests and abilities. An essential aspect of the personal development program is the assisting and working with each pupil in ascertaining his particular kinds of talents and capabilities and helping him to insightfully and penetratingly determine for himself the character and nature of the kinds of talents unique to him as an individual. Here again the director of personal development will play a major role, but it will be a role considerably different from that often carried out in the traditional high school of the past by guidance counselors. Certainly, various tests of a prognostic and analytic nature that will enable each student to obtain evidence on the nature and range and extent of his talents in particular areas are necessary, but assessment of the capabilities should also go beyond the typical information provided through formal tests. Parents of many children can participate in this process of assessment of potentialities, but in family situations where this is not feasible, the school itself will of course need to play the primary if not the sole role of advisor and counselor to the student. Above all, the director of personal development should not force the student into a decision about career plans nor even about the range and extent of his interests and capabilities at too early an age, but rather should assist him in developing the perceptions and self-concepts and attitudes that will enable the student continuously to make such assessments for himself, drawing on outside sources of help as desirable. The adolescent and the young adult need ample opportunity to explore possibilities, to gain experience in various aspects of human activity, to try out, to observe other people at work in their fields of endeavor and in their vocational interest, to travel, and simply to grow up in a situation that is free from pressure to make a decision on careers before the youngster is in a position to do so wisely. In light of the tremendous increase in productivity of people in all sorts of jobs and the reduction in human labor made possible through techno-

logical advances, there need not be in the future any great pressure on young people to make career decisions prematurely and before they have an adequate base on which to make such decision wisely and insightfully.

Formal course work for talent and career development will be comprised of advanced courses in all of the academic areas such as science, English, social sciences, mathematics, foreign languages, and the humanities. But there will also be provided specialized opportunities in the arts, both graphic and dramatic, creative and musical, in sports and athletics, in recreational activities, in homemaking, and family life programs, psychology and human relations (in addition to inclusion of some of these fields in the humanities and social science programs), and industrial arts and crafts.

Much of the direction of development in the high school of the future in the areas of specialized study will be in the content and the instructional methods used in the courses themselves. A great deal of time should be devoted to meaningful and significant work both in formal laboratory settings in the school and in community settings in the sciences, the humanities, and of course in the creative arts and industrial arts and crafts program. Students should be able to work on projects, individually or in small groups of similarly interested students, carry on research, to participate, if not actually plan and carry out meaningful and significant community projects, and, in general, to probe deeply into those fields of particular interest to them.

Summer opportunities of many kinds should be available for students, such as participation in full-time programs devoted to the fine arts, music, dramatic arts, and the like, travel, both in this country and abroad, work in all sorts of community projects and activities, and formal study in the same kinds of courses and individual projects offered during the regular academic term of the year. If the high schools of the future are operated on a year-round four-quarter basis, these kinds of opportunities should still be available in at least one or two quarters of the school year.

Education for Citizenship

The high school has most typically heretofore sought to educate its students in our secondary goal category, citizenship, through social studies instruction and some approaches to the practice of citizenship. Typically, the social studies offering has been heavy in history, with perhaps one year's study of "Problems of American Democracy" or course of related content required. Little evidence has ever been accumulated to indicate that courses in social studies produce desirable civic behavior in or out of school. Student council and other experiences in operating civic enterprises have too frequently given students very little opportunity to

govern their own affairs.⁸ Activities and clubs may offer more opportunity for student direction but frequently involve relatively few students.

Such possibilities as suffrage for 18-year-olds and the generally increased interest in student responsibility and involvement must be reflected in curriculum opportunities much more relevant to the goal of citizenship education than are those now generally available. We see these types of curriculum and instruction opportunities as potentially relevant:

1. Systematic instruction in the bases of social and economic problems and the processes of social action
2. Student forums on social, economic, and civic issues
3. Responsible participation in social and civic enterprises of the school and community

Instruction in social and economic problems and processes. Some core of social studies content should undoubtedly continue through the high school period. Hopefully the current investigations in social studies curriculum materials will yield reliable data as to the basic concepts, institutions, and processes to be included and as to instructional strategies which will produce effective knowledge of the selected concepts, institutions, and processes. Whatever pattern of content is selected should help the adolescent arrive at answers to such questions as these:

1. What are the rights and responsibilities of citizens in American democracy?
2. How can individual welfare and social progress best be secured?
3. What devices have men used effectively to regulate social and economic behavior and advance social and economic welfare?
4. What forms of social and economic organization are appropriate in various population areas and cultural groups?
5. How can the individual citizen most effectively participate in civic decisions and social action?

Instruction designed to help students acquire the knowledge, interest, and skill to answer such questions for themselves must be carefully planned, effectively organized, and methodically evaluated. Undoubtedly, it will include some strands of content traditionally included in the fields of American and world history, geography, anthropology, sociology, economics, and political science. Organizing principles for this content need to be determined and somewhat continuously reviewed for their appropriateness to particular instructional situations. We can only agree with Wilhelms that this job is still to be accomplished:

* See Allan A. Glathorn, *The Principal and the Student Council* (Washington, D.C.: National Association of Secondary School Principals, 1968), for an indictment of typical student councils in relationship to the citizenship objective.

At one level there is tremendous ferment for the sweeping social studies reorganization we have to have No one group, no one set of ideas, has yet emerged into the commanding position it would need in order to effect so fundamental a change. There is no concerted leadership. There is not even general agreement that citizenship is their goal

The resources are at hand. For the first time in history we have at least the beginning of genuine science in such areas as sociology, economics, political science, geography, social and cultural anthropology, and history itself. The crucial question is whether we decide that *the social studies are for citizenship*. If we do, then we can bring the sciences to bear on the lives of people.

Whether we win or lose, the effort to shape up a citizenship education that counts is going to be one of the major priorities of the decade —because it has to be.⁹

We see instruction in social problems and processes as occurring in large and small groups. Large groups (from 15 to hundreds) could well be used for presentations, by sound and sight using various media, of basic information, historical episodes, case studies, and current issues. Each large-group presentation should be followed by small-group discussions (up to 15) for interaction of presenters and students, for raising questions, for testing out ideas and opinions, for sharing of reading and other resources by individual students, and for agenda-building for subsequent large-group presentations. Simulation and gaming can be used in the small groups and combinations thereof for further exploration of concepts and problems indicated in presentations and discussions. Periodic pretests of student understandings of the basic content of the presentations could be used to identify students who would not be scheduled for the presentations and discussions on the instructional units involved, and posttests to determine students who need additional instruction. That is, a basic core of content for each major instructional unit would be defined, with testing used to help each student reach a defined minimum level of understanding.

The individual development groups described in the previous section may also be used in part for the discussions of social problems and processes. This would be especially appropriate in those situations in which the directors of individual personal development are also specialists in the social studies area. Various types of teaming and scheduling in individual schools could be used to provide the best persons possible for both functions, recognizing that in many cases a single teacher would be competent for both purposes.

Student forums on civic and social issues. Supplementing the core of

⁹ Fred T. Wilhelms, "Which Way to a Curriculum for Adolescents?" *NEA Journal*, 56: 14-15 (December 1967).

content on social problems and processes would be student-organized forums on civic and social issues. These forums would be devoted to current and controversial issues in the school, community, and world. Student and faculty presentations and debates as well as presentations by resource persons from outside the school would be featured, with full opportunity for participation from the audience. Forums could result in resolutions to be communicated by forum officers to whatever body they are directed.

As we see the development of student forums, their success would depend largely on the importance attached to them by students and faculty. They would tend to take on increasing importance as student management is given increasing responsibility for the selection of forum topics and speakers. The forums would likely be more successful if attendance were voluntary, if they occurred during the school day, and if none of the credit-marks-examination paraphernalia of traditional instruction were included.

Civic participation. Active participation in civic and social organizations and activities of school and community is highly desirable for each student. At the school level, many students have opportunity to participate as leaders and representatives in school government (see page 216), and the use of balloting procedures should become more common in connection with all issues and elections involving student decisions. Increasingly, too, students should gain experience in voting by student polls on issues and elections in the community, state, and nation.

At the community level, tomorrow's high school should work out as extensive arrangements as possible for student apprenticeships and other roles in community organization. We would see the school continuing an annual inventory of organizations and of roles they would have high school youth perform as members, assistants, or apprentices. The organizations would include every governmental body and office, every civic and service club, and all other organizations having as their fundamental purpose the operation or improvement of any phase of civic and social action in the community. Once the inventory is complete with reference to each organization's purpose and program and its possibilities for student participation, interested students would be recruited. The directors of individual personal development should be of great assistance in identifying students for the various roles. Undoubtedly, only a minority of the total high school population would be involved at any one time; but successful involvement should result in widened opportunities for additional students. In addition to official government agencies, political parties, citizens' associations for various purposes, labor and management organizations, and social agencies would seem most likely to have most opportunities for student apprentices.

Summer experiences as interns in various governmental agencies at the city, state, and national level would offer intensive experience to a

small number of students especially interested in more extended training. Others might have part-time employment during the school year, in government offices and social agencies.

Scheduling of these participating experiences would necessarily be highly individualized. Many of them would occur outside the regular school days; others would need to be arranged in students' nonscheduled school time; and some more intensive experiences, such as full-time internships, would need to be arranged in summer or other periods when school attendance is optional, or for some students as a substitute for school, with arrangements made for continued progress in the school program. Essential to such scheduling would be the assistance of the directors of individual personal development.

Education for Continued Learning

The historic function of the high school as preparation for college must be changed in tomorrow's high school to preparation for continued learning, our third goal category, whether in college (junior or four-year), technical institutes, on the job, in the home, or elsewhere. Not a new objective, education for continued learning may have been more poorly achieved than any other: witness the continuing high mortality rates in high school and college and the obvious failure of large numbers of adults to adjust successfully to changing conditions of work and life as well as the poor learning habits evidenced by the absence of intellectual pursuits in the recreational and vocational choices of many, if not most, citizens. The gap between classes in our society may turn into one between those who continue to learn in an ever-changing world and those who do not.

To make learning more central in the lives of all people, the high school of the future is challenged to make it more attractive, to do a better job of teaching learning skills, and to provide better counseling services for students as they make decisions concerning their careers in formal education. Some characteristics of the high school's attempts to meet these challenges follow.

Making learning more attractive. Pat arguments for continued schooling resting on the income attributable to further education may still be pertinent but not adequate for tomorrow's society. Youth must see continued learning as bringing happiness and personal security as well as financial support. Leonard sees learning as "ecstasy":

At its best, its most effective, its most unfettered, the moment of learning is a moment of delight. This essential and obvious truth is demonstrated for us every day by the baby and the preschool child, by the class of the "artist" teacher, by learners of all ages interacting with new learning programs that are designed for success. When joy is ab-

sent, the effectiveness of the learning process falls and falls until the human being is operating hesitantly, grudgingly, fearful at only a tiny fraction of his environment.¹⁰

Tomorrow's high school will be very different from today's if education really becomes "ecstatic" for all of its students. We see three basic conditions to be met if learning becomes such a happy, successful experience that students want to make it central in their lives. In the first place, intrinsic motivation must become the dominant force in the individual's education; all of the measures already described relative to individual personal development are directed to this end. Central in them is the learner's increasing responsibility for his own learning, with his director of individual personal development constantly helping him in the identification of purposes and choice of curriculum opportunities.

In the second place, teaching must become far more effective in the maintenance of student interest and success. Goodlad has proposed the following means of making classrooms exciting rather than boring:

1. Teaching must be characterized by efforts to determine where the student is at the outset of instruction. Diagnose his attainments and problems, and base subsequent instruction on the results of this diagnosis.
2. Direct learning toward "learning how to learn" and toward self-sustaining inquiry, rather than to memorization and regurgitation of facts.
3. Increase direct observation by the student of physical and human phenomena.
4. Emphasize classrooms which are characterized by a wide variety of learning materials and not dominated by textbooks.
5. Give attention and concern to individual differences through assignments, class discussions, use of materials, grouping practices, and evaluation.
6. Encourage teachers who understand and use individual learning principles as reinforcement in motivating and training the student.
7. Employ small and large group discussion, with the teacher in the background rather than the forefront.
8. Search for innovative ways to deal with special educational problems, such as those presented by environmentally handicapped children.¹¹

In the third place, the school must eliminate many practices which have tended to dehumanize it and thereby generally to make it a place large numbers of human beings want to avoid or escape. A list of "dehumanizing practices and conditions" drawn up by the ASCD Commission on Humanism in Education is suggestive of the practices to be eliminated in the high school of tomorrow if education is to become more humane and attractive:

¹⁰ George B. Leonard, *Education and Ecstasy* (New York: Delacorte Press, 1969), p. 20.

¹¹ John I. Goodlad, "Toward a More Relevant Curriculum," *I/D/E/A Reporter* (Summer Quarter 1969), p. 7.

1. The marking system and
 - a. The competition it inspires
 - b. The comparisons it makes
 - c. The pressure it creates
 - d. Failure
2. Corporal punishment
3. Overcrowding and resulting
 - a. Class loads
 - b. Easy anonymity
 - c. Shallow teacher-pupil relationships
 - d. Loss of privacy
4. Curricular tracking and
 - a. The caste system it nurtures
5. Inflexible and non-variable time schedules
6. The scarcity of legitimate postgraduate options and
 - a. Pressure to attend college
7. The "single text" approach and
 - a. The conformity it demands
 - b. The boredom it creates
8. The grade-level lock-step which ignores what we know about the ways in which unique selves develop and
 - a. Accompanying imposition of single scope and sequence schemes
9. Misuse and misinterpretation of intelligence, achievement, and aptitude tests
10. Testing instead of evaluating
11. Teacher evaluation of students
12. Failure to reflect teacher responsibility for grade or mark "achieved" by student
13. The "objectivity model" which prevents meaningful relationships from developing between teachers and pupils
14. The ignoring of the principle of "feedback readiness"
15. The "right" answer syndrome
16. Misuse of cumulative records
17. Demonstrated distrust instead of demonstrated faith.¹²

Developing learning skills. As tomorrow's schools generally become more effective at all levels, the high school can focus more fully on the higher intellectual processes. The great majority of adolescents will already be proficient in the skills of getting information, even of organizing and analyzing it. These are the skills we would list as follows:

¹² Cited in Arthur W. Combs, "An Educational Imperative: The Human Dimension," Chap. 17 in *To Nurture Humaneness: Commitment for the '70's* (ASCD 1970 Yearbook; Washington, D.C.: Association for Supervision and Curriculum Development, 1970), p. 179.

Reading

Listening

Asking questions; interviewing

Viewing films, television, and other sight-sound media

Using library tools and resources

Observing the natural and social environment

Organizing information

For the adolescents who enter high school with deficiencies in these skills, machines and human tutors will be employed to accelerate their skills development, and specialized help will be available for those with marked disabilities.

Undoubtedly computer-assisted instruction will be used both for basic instruction in learning skills, and as a plan of instruction in some areas. As information storage and retrieval systems become more commonplace, the skills of using these systems must also be taught. Already programmed instructional materials are used for skills development and other types of instruction, although their replacement was foreseen by Trump and Miller in their 1968 prediction regarding wider use of computer-assisted instruction:

The programmed instruction materials of today will doubtless constitute the museum pieces of tomorrow. Already persons are suggesting that the first programmed textbooks and "teaching boxes" belong in the Smithsonian Institution and other museums. What teaching machines do today will be done more efficiently tomorrow by computer-assisted instruction. Computer programs not only can monitor individualized instruction, determining progress for each student according to his talents and interests, but also may push the learner along more efficiently than most teachers and most programmed instruction can today. Moreover, in addition to mediating instruction the computer will produce individualized records of progress so each person will know much better than today how he is getting along. In turn, his teachers, parents, and other interested persons also will know better than today what progress is being made. The research and development programs of today will produce better and more economical computer-assisted instruction tomorrow.¹³

In a very useful article on the specifics of computer-assisted instruction, two leaders in the field described the advantages of teacher-computer teamwork in drill and practice as follows:

The drill-and-practice approach lends itself readily to many subject areas in both elementary and secondary schools, and provides an opportunity for teachers to be creative in introducing and developing new concepts in class. Teachers, however, are not able to provide immediate

¹³ J. Lloyd Trump and Delmas F. Miller, *Secondary School Curriculum Improvement: Proposals and Procedures* (Boston: Allyn and Bacon, Inc., 1968), p. 353.

feedback to 30 or more students as they work through a set of exercises. The computer is capable of presenting individualized lesson material of appropriate complexity to a number of students almost simultaneously, in addition to providing immediate feedback and correction. Further, a report on each student's performance is furnished the teacher as an aid in evaluating student progress.¹⁴

For more complex learning skills, the high school of tomorrow will need specific laboratory training programs in addition to emphasis on these skills in many instructional areas:

Generalizing from observation, reading, incidents, and so on

Through dialogue and discussion arriving at group analyses, consensus, recommendations, and other products of shared thinking

Evaluating information, opinion, observation, and so on

Inferring cause-and-effect relationships

Problem solving—individually and by groups

Tomorrow's high school will provide laboratories in problem solving and group dynamics in which students will be guided through role playing and simulation, dialogue (perhaps with both humans and machines), and other forms of group interactions, to sharpen these learning skills.

Counseling for continued learning. Much of the counseling of students by the directors of individual personal development will be in the choice of continued learning opportunities, and special academic and vocational counselors will provide more detailed information and even diagnostic services. These services will be greatly needed as the United States becomes more a learning society providing extensive opportunities for continuous schooling from the cradle to the grave, including a type of schooling that further enables a person to withdraw from formal education institutions and still continue his own self-directed learning. Computer-assisted counseling systems seem a definite possibility.

Just what the role of the high school itself will be in the establishment and development of these programs is not yet clearly established, but certainly high school counselors will be involved in students' decisions regarding their post-high school careers as learners. Undoubtedly, in many school districts, the high school itself will continue to offer courses and various types of programs for the young adults and the adult citizens of the community. But these programs should expand, should include opportunities of a more significant and challenging nature than those currently available in many school districts, and should be much better planned in terms of basic functions, aims, and objectives with extensive participation by the public.

¹⁴ Patrick Suppes and Max Jerman, "Computer-Assisted Instruction," *The Bulletin of the National Association of Secondary School Principals*, 54:28 (February 1970).

Moreover, many school districts will offer formal programs for occupational preparation in some form. Undoubtedly some of these occupational programs will begin in the high school itself, and some that require only a limited amount of specialized preparation may end there, but other programs will extend into the post-secondary period of schooling either in community colleges, adult education programs, or in vocational and technical institutes. In large or urban school systems these post-secondary institutes will be operated by the local school system itself, and there will be statewide systems of such institutes for the young adults and older citizens who live in nonurban areas.

In addition to these formal programs of occupational training, there will also need to be extensive provisions made for what is often called retraining, upgrading of occupational competencies, and the development of new occupational competencies. Many of these programs will need to be offered on a basis such that they can be taken by full-time employed people and partly employed people, as well as those not currently employed at all.

Beyond the area of occupational preparation there is another vast realm for continued schooling: extensive opportunities for education in the areas of the arts, humanities, social sciences, sciences, home and family life, health and physical fitness, and recreational education. And of special importance should be extensive opportunities for study and penetrating analysis of pressing social, economic, political, and ecological problems. Again, just what part of these programs the secondary school itself should offer is highly uncertain; the important point we are making here is that such a program for continuous schooling of the population will be demanded, and the high school should begin the counseling of students into them. This service may well be provided out-of-school youth as well as students nearing high school completion.

Education for Economic Competence

The program in our fourth goal category, education for economic competence, will have three phases: (1) work experience in school and community; (2) study of occupational possibilities; and (3) consumer education. These aspects of education have generally been lacking in today's high school, although a few students have had some work experience education in the past and career days and units have frequently been included. Thus, in Tyler's language, the high school has been "an adolescent island outside the major currents of adult life":

Modern society has increasingly isolated adolescents from the adult world. Yet this is the time of life in which young people are looking forward to being independent adults, they need opportunities to work with adults, to learn adult skills and practices, and to feel that they are becoming mature and independent. Hence, the restrictions on youth em-

ences which will follow, and (3) vocational—contracts for some, in the late stages of their enrollment, which mark full and continuing career entrance, but for whom the relationship with the school is still as "junior learner" and for whom the guide is still a friend and counselor.¹⁷

We recognize fully the enormous difficulty of providing significant work experience for all youth in a society in which machines are increasingly taking over adult labor with resultant decrease in work time and increasing diversity of occupations. Nevertheless we regard understanding of work opportunities, demands, and skills as one of the priorities for youth, and believe school and community can be much more resourceful in identifying types of work needs in which youth can profitably engage. For example, grave concern for environmental pollution and debeautification even in 1970 was producing many youth corps for cleaning up neighborhoods, beaches, and waste heaps; mobilization of high school groups for these purposes in the future could not only provide work experience for socially significant purposes but also be an effective means of developing understanding of our people's problems in maintaining a safe and attractive environment.

The program of work experience in particular will be highly individualized. For some youth, a few days of service per year of gainful or volunteer employment may suffice. Some youth will have jobs at home or in the community which already meet their needs. Some will wish to use their summers for work. Some may have community civic experiences which involve definite work responsibilities. But the majority of the student population may well be helpless in finding work opportunities; for them are needed the full resources of school-community planners to identify jobs to be done and the constant attention of directors of individual personal development to the needs and capabilities of individual students.

Study of occupational opportunities. Expanding knowledge of occupational opportunities should be developing throughout schooling as students are constantly exposed to the various fields of knowledge and the widening scope of human activities. By high school, these studies can well be systematized and personalized to bring into the adolescent's purview occupational fields and the requirements, opportunities, and conditions of those in which there is interest. Probably some type of investigation each year of one or more fields of interest is desirable. Such studies could well be coordinated by the directors of individual personal development, who would also seek to help each student relate so far as possible occupational interests to work experience and to plans for continued study.

¹⁷ See Archibald B. Shaw and John Lyon Reid, "The Random Falls Idea," *The School Executive*, 75:47-86 (March 1956).

Consumer education. Past efforts to develop the skills and understandings needed for choosing, buying, and using goods and services have been generally sporadic and unsuccessful. One approach has been the elective course or unit in economics, consumer education, or related content, taken by a relatively small minority of students. The other approach has been to rely on individual units of instruction in courses in home and family living, social studies, mathematics, and other fields. We see neither of these approaches as satisfactory in tomorrow's high school whose students themselves have great buying power and will shortly have more, whether as college students, wage earners, or homemakers. Hence we see the consumer education definitely placed in two curriculum elements already described: (1) economic problems and processes in the social studies core (see "Education for Citizenship" above) and (2) specific consumer problems in the "Home and Family Living" component of "Education for Personal Development" (see above). Even this separation could become somewhat artificial, and it is expected that faculty members working in both programs will frequently plan together their instructional objectives and strategies to guard against undue omission or duplication of essential concepts and problem areas.

Tomorrow's High School and the Community

Already in this book we have assumed an increasingly close relationship of school and community. Thus in Chapter 6 we described the possibilities of the use of the community as a laboratory for information and experience, and in Chapter 8 we noted the importance of independent study activities outside the school building. Earlier in the present chapter we emphasized the role of community experience in the programs of citizenship and economic education. As we see tomorrow's high school, a far more effective school-community partnership than exists today is essential. To this end, certain conditions are prerequisite: better public understanding of the educational program, more involvement of parent and community representatives in program planning, and curriculum plans encompassing community resources.

Better Public Understanding of the Educational Program

A 1969 study by George Gallup for the CFK, Ltd. Foundation, was highly revealing as to the lack of public information about the local schools and education. Conclusions of the study of particular pertinence follow:

While the American people seem reasonably well-informed about school activities, they are ill-informed about education itself.

Since they have little or no basis for judging the quality of education in their local schools, pressures are obviously absent for improving the quality.

Fortunately, the public would like more information about modern education, the new methods being tried, and the new ideas concerning the kind of education needed. In short, they need and ask for information that is presently not provided by the various media of communication.

The public schools do a reasonably good job of interesting parents in school affairs. They do a very poor job in reaching those who do not have children attending the schools. A better way must be found to reach those persons in the community who do not happen to have children in the public schools, so that these persons may become informed, involved, and active. The future of the schools to a great extent depends on success in achieving this goal.

Finally, the survey helps to explain the slowness of the schools to accept innovations. So much effort is consumed in keeping the schools operating and doing a reasonably good job, that little time can be devoted by school officials to promoting change. The public is so uninformed about innovations and so lacking in objective ways of judging school achievement that little, if any, pressure is exerted by them to make improvements, or is likely to be exerted until they are more knowledgeable in this area.¹⁸

Certainly tomorrow's schools must do a much improved job of communication with the public. In addition to more active involvement of the public in school planning, better communication involves more effective liaison with media agencies, more attractive materials for distribution to parents, better use of students as interpreters of the school program, and better communication between school staff members and the people in the community with whom they work and otherwise are associated. Better training of school personnel in communications is specifically indicated.

Community Involvement in School Planning

Already new approaches to community participation in school planning and operation are being tested out in urban centers, especially through attempts to decentralize school management. Patterns of administration, organization, and management will surely emerge to break down bureaucratic tendencies and give school patrons and supporters better opportunities to make their wishes known, to share with educators in planning for educational opportunities in home, school, and community, and in evaluating school needs and financial support. More effective systems of

¹⁸ George Gallup, *How the Nation Views the Public Schools: A Study of the Public Schools of the United States* (Melbourne, Fla.: J/D/E/A Information and Service Division, 1969), pp. 23-25.

organizing and operating advisory councils, school boards, and community-school planning groups are sorely needed. The need and the possibility here are well stated in Gilchrist's essay on "Leadership for Schools of the Future":

School boards, as well as administrators, have in many cases, never learned to be responsive to any but the most vociferous or prestigious of community groups. Local control of schools was once a matter of geographic necessity; now it is a socio-psychological imperative. The school of the future must be controlled locally in a context harmonious with democratic goals for lifting the ceiling of educational opportunity for every individual. The dehumanization of education through institutionalized bureaucracy must be reversed with new approaches to school decentralization. The individual school with its local citizenry must have more control over the directions of education in that school. Teachers, along with the entire spectrum of professional educators, must become articulate in expressing to citizens their best judgments about educational needs. As parents and citizens at large become more and more strategically involved in decision making, educators must push themselves to communicate and become responsive in a new kind of partnership with parents.¹⁸

We agree also with Gilchrist's emphasis on the role of the teacher in effecting citizen participation:

Even if administrators were to serve ably and skillfully in their positions, they alone could not adequately assess the feelings and concerns of citizens. It is at the classroom level that the public nerve is touched. Participation of citizens in constructively shaping the program of the school strongly depends upon the attitudes and skills of the classroom teacher. Positive community participation cannot be built without the involvement of individual teachers who serve as keystones in a structure of community cooperation. Unless there is face-to-face discussion between individuals and small groups of teachers and citizens, there can be no foundation in the local school situation upon which overall decisions can be based. The larger policies will be superficial without basic community support.¹⁹

Curriculum Planning Encompassing Community Resources

Specific aid by many community representatives will be essential to the various learning opportunities proposed in this chapter relating to community resources. To recapitulate, these include:

¹⁸ Robert S. Gilchrist, "Leadership for Schools of The Future," in Alexander, ed., *The High School of the Future: A Memorial to Kimball Wiles*, p. 231.

¹⁹ Gilchrist, p. 232.

Advisory services of psychologists, psychiatrists, medical doctors, social service agents, and other specialists in planning programs of individual personnel development (and perhaps in counseling of the individual student as school-employed personnel are not available or need additional help)

Community resource personnel to assist in educational programs relating to mental and physical health, recreational activities, home and family living (including sex education); and in the core instruction in social and economic problems and processes, and in the student forums

Student apprenticeships and other roles in community organizations

Work experience activities in the community

Resource persons to assist in the study of occupational information and in consumer education

Such assistance cannot possibly be provided without extended joint planning between school and community representatives. Furthermore, curriculum plans should include specific channels and personnel responsible for implementation of plans for using all such resources.

The School Organization and Facilities

We can only sketch here in very broad outline some of the features of the school organization and facilities needed for the educational program we envision for tomorrow's high school. Obviously local planning groups have to determine what program features they will have in their high school and the types of organizational patterns and facilities they will provide. We would anticipate that proper planning would provide as a minimum the characteristic features we now briefly identify.

A Home Base for Each Student

We have dealt in detail with the concept of a director of individual personal development and his responsibility for program planning and many types of instruction for a relatively small group of students. We recognize that this concept and position are new, and that varied expedients may have to be used to give every student the personalized attention of such a guidance service and home base arrangements.

As we see it, the home base group would be heterogeneous except on the factor of year of entrance to the school, although subject interest or other bases could be employed. Each such group should have its headquarters room, and in or adjacent to his room each student should have some place for his materials needed at school and at which he can work during independent study periods. The room would also be used for group meetings, student seminars, planning committee sessions, and director-student conferences (hopefully, the director will have an adjoining office that can be used for individual conferences). Students should have

responsibility for the maintenance of the room, including conditions for work.

Individualized Progress Systems and School Levels

Shane's challenging concept of a "curriculum continuum" already described in this chapter anticipates that "a discrete secondary school program would cease to exist." He wrote on:

But so would the elementary school on one hand and college on the other. Graduation exercises would become obsolete, since one cannot graduate from a continuum.²¹

We accept enthusiastically the idea of a curriculum continuum making for continuous progress through the school, but we do believe that even in the educational center or park, there would be domains primarily for childhood (to about ten years of age), transescence (about ages ten to fourteen), and adolescence (ages fourteen through nineteen). We see much movement of individual students between these levels for special opportunities at a level other than their own, and much use of staff at more than one level. But the program at each level would be so individualized and so rich in learning opportunities that students would ordinarily progress automatically from one level to another as they completed a normal, expected period of years (probably at least five or six in the primary or elementary level; four or five in the middle; and four in the high school). In any event, students would be expected to remain in the high school until they were at least sixteen years old and not to attend except on a part-time, continuation basis after they became twenty years old.

Openness in the School

Several emergent practices at the beginning of the 1970s moved toward what we characterize as "openness" in school organization and facility. For one thing, new school construction is constantly aiming toward fewer inside walls and partitions, and school scheduling toward fewer areas that are not available for use at all times. For another, movements toward various alternatives to the formal institutional stereotype of a school indicate an interest in much more flexible or open schooling patterns.

Robinson reported in March 1970 an identification of over 700 independent schools founded during the previous three years "... as teacher, parents, and students seek alternatives to the stultifying climate

²¹ Shane, p. 391.

of so many public schools."²² He attributed their rise to feelings of "frustration and resentment because schools are so regimented, administration so unsympathetic, teachers so humstrung, and learning climate so sterile . . ." and concluded that:

The entire movement may prove ephemeral. But even if few alternative schools survive, the movement will have made its contribution to reform, much as third parties in our political history have forced the established parties to adopt social reforms.²³

Not all of the experimental, more open schools are outside the public school system. The school perhaps attracting most attention at the turn of the decade was the Parkway School in Philadelphia (see Chapter 8). Its school-without-walls nature is described in a bulletin from the school district as follows:

The year around Parkway Program sets up new boundaries, and provides a new framework in which the energy of all of us can be used in learning and not in maintaining an obsolete, inefficient system. There is no school house, there is no separate building; school is not a place but an activity, a process. We are, indeed, a school without walls. Where do the students learn? In the city. Anywhere and everywhere. If students are to learn about television, they cannot do this apart from the studios and locations in which television is produced. So we use television studios and we use radio stations, and we use the museums, social service organizations, and we use the business community. The Philadelphia city government departments assist us—the Police Department, and the District Attorney's office to name only two. Parents help us. A large number of people help us and we are very grateful. Everyone has a stake in education, everyone has a right and a duty to be involved, to participate. The community helps us in a great variety of ways; by providing us with meeting space, with resources, with instructors, even with total programs, and without the community's help we cannot do our job.²⁴

President Johnson's 1966 prediction that the school of the future must be fully open, fully operating the clock- and the year-round, seems to us justified for the high school of tomorrow, though its achievement still seems years ahead:

Tomorrow's school will be a school without walls—a school built of doors which open to the entire community.

²² Donald W. Robinson, "Alternative Schools: Challenge to Traditional Education," *Phi Delta Kappan*, 51:374 (March 1970). See also Jonathan Black, "Street Academies: One Step Off the Sidewalk," *Saturday Review* (November 15, 1969), pp. 88-89, 100-101.

²³ Robinson, p. 375.

²⁴ John Bremer, *The Parkway Program* (Philadelphia: The School District, 4th ed., January 1970), pp. 4-5.

Tomorrow's school will reach out to the places that enrich the human spirit—to the museums, the theaters, the art galleries, to the parks and rivers and mountains.

It will ally itself with the city, its busy streets and factories, its assembly lines and laboratories—so that the world of work does not seem an alien place for the student.

Tomorrow's school will be the center of community life, for grown-ups as well as children—"a shopping center of human services." It might have a community health clinic or a public library, a theater and recreation facilities.

It will provide formal education for all citizens—and it will not close its doors any more at three o'clock. It will employ its buildings round the clock and its teachers round the year.²⁵

The educational program proposed in this chapter will require a considerable degree of openness, perhaps not as much as in the Parkway School or the street academies or even as President Johnson recommended. Unfortunately, many of tomorrow's high schools will have to be operated in today's (even yesterday's) buildings, and the size of many schools will greatly limit openness. But programs such as we have described that involve independent study, team teaching, work in the community, and flexible progress and scheduling will have to open doors between instructional spaces and from the school into the community. Doors can be opened—even in and from heretofore closed schools!

Learning resources centers. Central in tomorrow's high school is the learning resource or instructional materials center. Shores' prediction²⁶ that by the year 2000 the library would replace the classroom as the center of learning may well be achieved before that date as more and more schools are built with open instructional spaces bordering on the library center and as more and more learning stations are provided in the center. Here, increasingly, are to be found all the media needed for a multimedia learning center: printed materials, microforms, films, film-strips, slides, overhead transparencies, photographs, paintings, radio, recordings, video tapes, television, telelectures, computers.

A vision in which one of us shared as to the future potentialities of learning resources is pertinent:

New communication tools ranging from the experimental EVR to television, telewriting, computers, and satellites open amazing new possibilities in instantaneous communication and in the exchange of materials

²⁵ Lyndon Baines Johnson, from an address delivered at the annual convention of the American Association of School Administrators, February 16, 1966; cited in *The Year-round School* (Washington, D.C.: American Association of School Administrators, 1970), p. 3.

²⁶ Louis Shores, "The Medium School," *Phi Delta Kappan*, 48:285-287 (February 1967).

and resources between schools and between countries. Video recording techniques, microforms, and the computer make possible a new world of storage and retrieval of information. More and more written materials are being produced that accommodate for individual differences and cultural differences and that rely on research-based knowledge. All these resources, however, are effective in proportion to the competence of educators to match resources to basic educational needs. As the resources are combined into systems that recognize variables of learning for individual students, the teaching-learning process can become more and more effective.²⁷

Other Organizational Features

We described in Chapter 8 several other organizational arrangements to facilitate curriculum individualization. The reader is referred to pages 276-293 for description of these features that we see highly appropriate for tomorrow's high school:

- School-within-a-school organization
- Independent study plans
- Flexible scheduling
- Nongraded continuous progress plans

The reader is also referred to Chapter 11 for description of emerging patterns of instruction that are dependent on the foregoing organizational features and on others identified there.

Staffing Tomorrow's High School

We shall have to leave to professors and students of secondary education as well as to other planners (boards of education and other community representatives, professional staff members, students, and parents) the development of precise specifications for the personnel of tomorrow's high schools. We have described many staffing arrangements, especially in Chapters 8 and 11 and the present chapter. Below are summarized the various types of staff positions our proposed educational program assumes, with a brief indication of the role of some positions and the qualifications:

School principal or director: educational leader of the school responsible for leadership in educational planning, program development, community relations, and staff development; doctorate in education with prior experience as associate administrator or other leadership role.

²⁷ Glenys G. Unruh and William M. Alexander, *Innovations in Secondary Education* (New York: Holt, Rinehart and Winston, Inc., 1970), p. 188. See Chap. 6 for illustrations of the use of such learning resources as computer-assisted instruction, dial-access and push-button systems, programmed instruction, telephone, and television.

with goals determined, program projected, and school-community cooperation assured, tomorrow's high school can achieve the aspirations of many generations and truly be an essential and successful step for adolescents toward a satisfying and effective youth and adulthood.

In closing this chapter and our book, the authors wish to emphasize once again the dire necessity of turning to high school students themselves as resources and participants for planning the high school of tomorrow. We heartily believe that such a school of tomorrow can make student involvement a positive force for improvement rather than the negative type of activism many schools faced in the early 1970s. But this much-needed shift will come only as school leaders make students significant partners in the educational enterprise.

Additional Suggestions for Further Study

1. Anderson, Vernon, E., *Curriculum Guidelines in an Era of Change*. New York: The Ronald Press Company, 1969. This cogent statement of guidelines for curriculum change includes an excellent "Rationale for a Curriculum That Prepares for Tomorrow's World."
2. Calderwood, James D., John D. Lawrence, and John E. Maker, *Economics and the Curriculum*. New York: John Wiley & Sons, Inc., 1970. Describes economic ideas and concepts and their applications in the curriculum, answering the question: What are the minimum economic understandings necessary for responsible citizenship, and how can these understandings be developed in the curriculum?
3. California Association of Secondary School Administrators, *Education Now for Tomorrow's World*. Burlingame, Calif.: The Association, September 1968. See for a careful analysis of the responsibilities of the high school to prepare youth for the future as indicated by current data as to future social developments.
4. Elam, Stanley, and William P. McLure, eds., *Educational Requirements for the 1970's*. Bloomington, Ind.: Phi Delta Kappa, 1967. Contains papers presented at a conference to explore forces for change expected to affect education in the 1970s, including race relations, economic planning, social welfare, and governmental roles.
5. Fantini, Mario, D., and Milton A. Young, *Designing Education for Tomorrow's Cities*. New York: Holt, Rinehart and Winston, Inc., 1970. Deals with strategies for reforming urban school systems, and uses a case study of the development of a school system in a model city.
6. Gittell, Marilyn, ed., *Educating an Urban Population*. Beverly Hills, Calif.: Sage Publications, Inc., 1970. Several authors contribute to this volume on the problems of urban education, case studies of decision-making in urban school systems, and approaches to achieving change.
7. Marcella R. Lawler, ed., *Strategies for Planned Curricular Innovation*. New York: Teachers College Press, Columbia University, 1970. Papers presented at a Teachers College, Columbia University, Conference, suggesting guidelines for introducing innovations successfully.
8. Neil G. McCluskey, *Catholic Education Faces Its Future*. New York: Doubleday and Company, Inc., 1969. Describes trends toward cooperation among public and parochial schools and predicts more such cooperation, as well as changes in the Catholic schools.
9. Resnik, Henry S., *Turning on the System: War in the Philadelphia Public Schools*. New York: Pantheon Books, Random House, 1970. Describes, with some adverse criticism, efforts beginning in 1967 to change the Philadelphia Schools through radical innovation and decentralization.
10. The Danforth Foundation and the Ford Foundation, *The School and the Democratic Environment*. New York: Columbia University Press, 1970. Several provocative papers discuss needs for making the schools more responsive to student needs and demands.

11. Wolff, Max, and Alan Rinzler, *The Educational Park: A Guide to Its Implementation*. New York: Center for Urban Education, 1970. Recommends educational park complexes as providing great opportunities for innovation; more than 100 communities are reported as constructing or studying the possibilities of educational parks.

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